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**U.S. Army
Environmental
Center**

U.S. ARMY ENVIRONMENTAL CENTER

**FORT RITCHIE
ENVIRONMENTAL BASELINE SURVEY**

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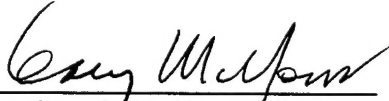
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13. ABSTRACT (Maximum 200 words) This document presents the results of the Environmental Baseline Survey (EBS) of Fort Ritchie Army Garrison located in Washington County, Maryland. Fort Ritchie is a 631-acre active military communications center selected for closure under the Base Realignment and Closure (BRAC) Act of 1995. As a BRAC site, the implementation of the BRAC environmental restoration program is required prior to the release and reuse of the Fort Ritchie property. The BRAC environmental restoration program begins by conducting the EBS. This EBS report presents the results of a detailed search and review of available information (Army, federal, state, and local), the analysis of aerial photographs, interviews with current and/or former employees, and visual inspections. This report focuses on the Fort Ritchie property and adjacent properties which may impact the condition of the Fort Ritchie property. This report includes the identification of potential sources of contamination, identification of ongoing response actions, and identification of areas requiring sampling and analysis in order to determine the environmental condition of the property. Based on the information gathered during the EBS, parcels at Fort Ritchie which have no history of contamination were classified into one of seven parcel categories. The parcel categorization of the Fort Ritchie property is presented in a letter report in Appendix J.					
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FORT RITCHIE ENVIRONMENTAL BASELINE SURVEY

FINAL DOCUMENT



Timothy A. Longe, Ph.D.
Project Manager
ICF Kaiser Engineers, Inc.



Gary L. McKown, Ph.D.
Program Manager
ICF Kaiser Engineers, Inc.

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ICF KAISER ENGINEERS, INC.
1301 CONTINENTAL DRIVE, SUITE 101
ABINGDON, MARYLAND 21009-2335

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LIST OF ACRONYMS AND ABBREVIATIONS

AAFES	Army Air Force Exchange Service
AAS	Atomic Absorption Spectroscopy/Spectrometry
ACBM	Asbestos Containing Building Material
ACM	Asbestos Containing Material
ADP	Automated Data Processing
AIRS	Aerometric Information Retrieval System
AISC	Army Information Service Center
AJCC	Alternative Joint Communications Center
AMCCOM	Armament, Munitions, and Chemical Command
ARNG	Army National Guard
AST	Above-ground Storage Tank
Bldg	Building
BCP	BRAC Cleanup Plan
BRAC	Base Realignment and Closure Act
CECOM	Communications - Electronics Command
CEMML	Center for Ecological Management of Military Lands
CEMML-FLAB	Center for Ecological Management of Military Lands - Floristics Laboratory
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERFA	Community Environmental Response Facilitation Act
CFC	Chlorofluorocarbon
CICIS	TSCA Chemicals in Commerce Information System
cm	centimeter
CO	carbon monoxide
COMAR	Code of Maryland Regulations
CORRACTS	Corrective Action Report
CWA	Clean Water Act
DARP	Department of Army Radiation Permit
DEH	Directorate of Engineering and Housing
DISA	Defense Information Systems Agency
DoD	Department of Defense
DOT	Department of Transportation
DPW	Department of Public Works
DRMO	Defense Reutilization and Marketing Office
DRMS	Defense Reutilization and Marketing Services
EBS	Environmental Baseline Survey
ECAS	Environmental Compliance Assessment System
EDC	Economic Development Commission
EDR	Environmental Data Resources
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
FATES	FIFRA and TSCA Enforcement System
FEMA	Federal Emergency Management Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FINDS	Facility Index System
FRDS	Federal Reporting Data System
FRDS	Federal Reporting Data System
ft	foot
FTTS	FIFRA/TSCA Tracking System

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

FURS	Federal Underground Injection Control
FY	Fiscal Year
GES	Goode Environmental Services
gpd	gallons per day
gpm	gallons per minute
HAZMAT	Hazardous Material
HMIRS	Hazardous Materials Information Reporting System
hr	hour
ICF KE	ICF Kaiser Engineers, Inc.
IRP	Installation Restoration Program
ISEC-CONUS	Information Systems Engineering Command - Continental United States
kg	kilogram
L	liter
lb	pound
LBP	Lead-Based Paint
LUST	Leaking Underground Storage Tank
MCL	Maximum Containment Level
MDE	Maryland Department of the Environment
mg	milligram
MITC	Military Intelligence Training Center
MLTS	Material Licensing Tracking System
mm	millimeter
msl	mean sea level
NCO	Non-Commissioned Officer
NFRAP	No Further Remedial Action Planned
NMCC	National Military Command Center
No.	number
NO _x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
O&M	Operations and maintenance
PADS	PCB Activity Database System
PCB	Polychlorinated biphenyl
pCi	Picocurie
PCS	Permit Compliance System
PID	Photo-ionization detector
PM ₁₀	Particulate Matter Less Than 10 microns in Diameter
ppm	parts per million
PVC	Polyvinyl Chloride
PWS	Public Water Supply
PX	Post Exchange main store
RAATS	RCRA Administrative Action Tracking System
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
ROD	Record of Decision
RPO	Radiation Protection Officer
SAR	Sampling and Analysis Recommendation
SDWA	Safe Drinking Water Act
SHWS	State Hazardous Waste Sites

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

SIA	Surface Impoundments
SOP	Standard Operating Procedure
SO _x	Sulfur oxides
spp.	species
SWF/LS	Solid Waste Facilities/Landfill Sites
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total petroleum hydrocarbons
TRIS	Toxic Release Inventory System
TROSCOM	Troop Support Command
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and Disposal Facility
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
U.S.	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventative Medicine
USAEC	United States Army Environmental Center
USAEHA	United States Army Environmental Hygiene Agency
USAISC	United States Army Information Systems Command
USAR	United States Army Reserve
USGS	United States Geological Survey
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWII	World War II
WWTP	Wastewater Treatment Plant
XRF	X-ray Fluorescence

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1.0 INTRODUCTION

Fort Ritchie is a United States (U.S.) Army Garrison under the control of the U.S. Army Military District of Washington. Fort Ritchie provides and maintains operational support for the Defense Information Systems Agency - Western Hemisphere; the Alternate Joint Communications Center/Site R (AJCC); Headquarters, U.S. Army Information Systems Engineering Command - Continental United States (ISEC-CONUS); and the 1108th U.S. Army Signal Brigade. It provides specified administrative, logistical, information systems, and physical security support to attached or satellite activities in accordance with directions from higher authority. The installation also maintains morale, welfare, and recreation programs. Fort Ritchie is one of many Department of Defense (DoD) facilities to be closed under the Base Realignment and Closure Act of 1995.

Fort Ritchie is located approximately one mile south of the Maryland/Pennsylvania border in Washington County, Maryland. It is situated near the upper end of a small valley at the foot of Quirauk Mountain, in the Catocin Range of the Blue Ridge Mountains. The installation consists of approximately 631 acres (Figure 1-1).

1.1 PROJECT DESCRIPTION

ICF Kaiser Engineers, Inc. (ICF KE) has been contracted by the U.S. Army Environmental Center (USAEC) to conduct an Environmental Baseline Survey (EBS) of Fort Ritchie to determine the environmental condition of the property as part of the base closure process. This work has been performed under Contract No. DACA31-94-D-0064, Delivery Order 0005. This EBS report presents the results of a detailed search and review of available information (Army, federal, state, and local), the analysis of aerial photographs, interviews with current and/or former employees, and visual inspections. This report focuses on the Fort Ritchie property and adjacent properties which may impact the condition of the Fort Ritchie property. This report includes the identification of potential sources of contamination, identification of ongoing response actions, and identification of areas requiring sampling and analysis in order to determine the environmental condition of the property. Based on the information gathered during the EBS, parcels at Fort Ritchie which have no history of contamination were classified into one of seven parcel categories. The Community Environmental Response Facilitation Act (CERFA) parcel categorization of the Fort Ritchie property is presented in a CERFA Letter Report in Appendix J. A Sampling and Analysis Recommendations (SAR) report for areas which require a more accurate evaluation of environmental conditions at Fort Ritchie is presented separately.

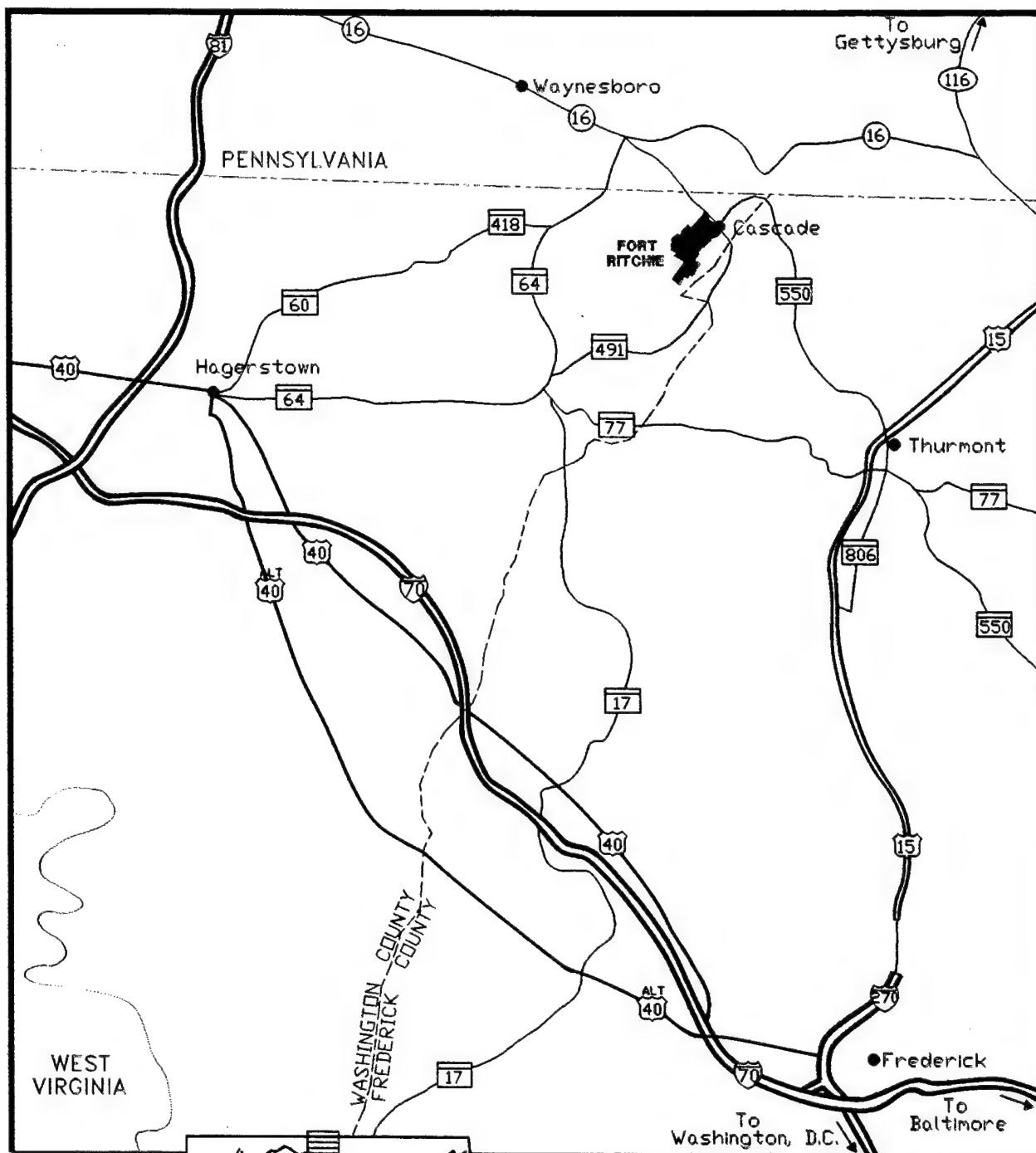
This EBS has been performed in accordance with the DoD *Fast Track Cleanup at Closing Installations* memorandum dated September 9, 1993; the DoD memorandum, subject: *Finding of Suitability To Transfer*, June 1, 1994; and the DoD BRAC Cleanup Plan (BCP) Guidebook, *Implementing President Clinton's Decision to Promote Early Reuse of Closing Bases by Expediting Environmental Cleanup*, Fall 1993.

1.2 AUTHORITY FOR THE ENVIRONMENTAL BASELINE SURVEY

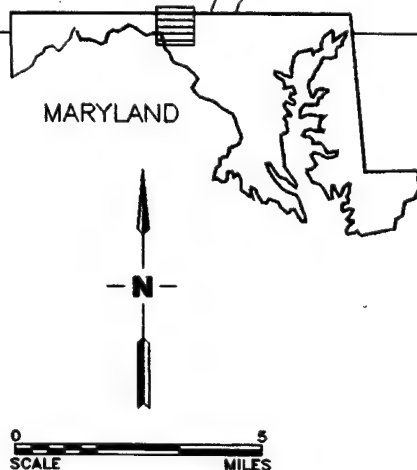
The authority for conducting this EBS is set forth under the Base Realignment and Closure (BRAC) environmental restoration program and the CERFA program.

The BRAC environmental restoration program was established in 1989 following the Base Realignment and Closure Act of 1988 (Public Law 100-526) which designated more than 100 Department of Army facilities for closure and realignment (BRAC 88). The Base Realignment and Closure Act of 1990

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SOURCE: 1993 MARYLAND STATE HIGHWAY ADMINISTRATION MAP



DEPARTMENT OF THE ARMY			
U.S. Army Environmental Center			
CONTRACT NO. DACA31-94-D-0064		FIGURE 1-1 FORT RITCHIE	
ICF KAMER ENGINEERS		1301 Continental Drive Suite 101 Aberdeen, Maryland 21009 (410) 812-5350	
PREPARED	K. MASON	TASK NO.	66225
CHECKED	T. LONGE	ICF DWG NO.	FTRITLOC
DATE	09-08-95		

**GENERAL
LOCATION OF
FORT RITCHIE**

(Public Law 101-510) established subsequent rounds of base realignments and closures (BRAC 91, BRAC 93, and BRAC 95). The Base Realignment and Closure Act requires that environmental issues at base closure properties be investigated pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Under the BRAC environmental restoration program, an Army BRAC property is investigated and any required on-site environmental contamination is cleaned up prior to the release and reuse of the property. The BRAC environmental restoration program is patterned after the Army's Installation Restoration Program (IRP) and also includes such categories as asbestos, radon, lead-based paint, polychlorinated biphenyls (PCBs), radiological hazards, and unexploded ordnance (UXO) which are not normally addressed under the Army IRP.

For sites listed in BRAC 95, the environmental restoration program begins by conducting an EBS. The EBS describes the environmental condition of the BRAC property and is subsequently used to determine the suitability to lease or transfer excess BRAC property. Procedures for conducting and preparing an EBS have been established by DoD.

In October, 1992, CERFA (Public Law 102-426) amended Section 120(h) of CERCLA and established new procedures with respect to contamination assessment, cleanup, and regulatory agency notification and concurrence for federal facility closures. The primary objective of CERFA is for federal agencies to expeditiously identify real property¹ offering the greatest opportunity for immediate reuse and redevelopment. Although CERFA does not mandate that the Army transfer real property so identified, the first step in satisfying the objective is the requirement to identify real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed.

1.3 OBJECTIVES

The objectives of conducting an EBS for the Fort Ritchie property are as follows:

- To meet the goals set forth in the DoD *Fast Track Cleanup at Closing Installations* memorandum dated September 9, 1993, and the DoD memorandum, *Finding of Suitability to Transfer* dated June 1, 1994.
- To identify parcels at Fort Ritchie, in accordance with CERFA, which have no history of contamination; and
- To recommend areas which require sampling and analysis in order to more accurately define the environmental condition of the property.

Information contained in this report forms the basis for dividing the Fort Ritchie property into CERFA parcels and for classifying the parcels into one of seven categories in accordance with the BCP Guidebook. The CERFA parcel categorization of the Fort Ritchie property is presented in a CERFA Letter Report in Appendix J. The information presented in this EBS report is also used to develop a Sampling and Analysis Recommendations (SAR) report for areas which require a more accurate identification of environmental conditions. The Sampling and Analysis Recommendations report is presented separately.

¹ For this EBS, the term "real property" means land and rights in land, ground improvements, utility distribution systems, and buildings and other structures of the Fort Ritchie Army Garrison.

1.4 REPORT ORGANIZATION

The EBS report is organized into three remaining sections and ten appendices.

Section 2, Survey Methodology, identifies the various documents reviewed at the Fort Ritchie installation, Maryland Department of the Environment (MDE), and Washington County departments. Section 2 also summarizes the interviews with current and past employees and observations made from visual inspections of the property.

Section 3, Property Characterization, covers the general information regarding the Fort Ritchie property such as property history, tenant activities, and the status of environmental permits. The demographics, climatology, hydrology, and sensitive issues of the surrounding environment are also discussed.

Section 4, Investigation Results, presents the results of the EBS survey. Previously identified sites of concern, new areas identified during the EBS, and adjacent properties that are potential sources of contamination for the installation are evaluated. Non-CERCLA related environmental hazard and safety issues are also discussed.

The CERFA Letter Report, which summarizes the CERFA parcels at Fort Ritchie, is presented in Appendix J. Also included in the appendices are references, interview summaries, storage and release inventories, database search results, and title documents.

2.0 SURVEY METHODOLOGY

The survey methodology used for the EBS followed the protocol established in CERFA (Public Law 102-426, October, 1992) and by the *DoD Policy on the Implementation of CERFA* (May 19, 1993) regarding contamination assessment. The methodology included a review of documents and records available at the Fort Ritchie installation, the MDE, and Washington County, as well as a database search of all federal, state, and county regulatory records and title documents. The site inspection included visual observations of areas where CERCLA-regulated hazardous substances or petroleum products may have been stored, released, or disposed. Past and current employees were also interviewed. A map of the Fort Ritchie property is presented in Figure 3-1.

2.1 EXISTING INVESTIGATION DOCUMENTS

Installation documents, aerial photographs, and maps were reviewed in order to evaluate pertinent information regarding the environmental condition of the Fort Ritchie property. These documents are summarized below and referenced in Appendix A. Installation maps dating back to 1926 showed the property boundary and building use. Most of the recent maps were drawn in 1990, and provided general information such as topography, current installation land use, temporary and permanent buildings, water and wastewater systems, and drainage channels.

2.1.1 Investigations of the Former Skeet Range

The investigations of the former outdoor skeet shooting range were initiated in 1992 prior to the construction of a new Maryland National Guard Armory at the shooting range site. The former skeet shooting range is located on the southern end of Fort Ritchie, on the east side of Ritchie Road. While all range structures were located on Fort Ritchie property, clay pigeons and shotgun shot crossed the property boundary.

Four reports on investigations regarding lead contamination at the former skeet shooting range were reviewed. In September, 1992, Spotts, Stevens and McCoy, Inc. issued a report summarizing soil sampling at a portion of the former skeet shooting range that was proposed for the construction of the Maryland National Guard Armory. The report identified the site as potentially contaminated by lead. A January, 1993, follow-up report summarized further investigation of the Armory construction area. The full extent of soil contamination was not limited to the construction area, but remedial action was determined to be necessary only for the construction area. The report outlined excavation and disposal options for more heavily contaminated soil. In November, 1993, an Environmental Assessment of the Armory construction site was conducted by Hillmann Environmental. The Hillmann report recommended excavation and disposal of lead-contaminated soil as a hazardous waste. The U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) conducted a recent study (1995) to determine the extent of off-property lead-contamination. The USACHPPM study confirmed that surface soil total lead concentrations were above the levels safe for residential use at the three off-site locations sampled. The study did not determine the lateral extent of lead contamination in the area. Further details on the analytical results and current status of this area are presented in Section 4.1.1.

2.1.2 Environmental Compliance Assessment System Reports

In July, 1992, an external Environmental Compliance Assessment System (ECAS) was conducted at the installation. This assessment identified 111 environmental compliance issues of which 76 were

negative, 10 were positive, and 25 were health and safety related at Fort Ritchie and Site R². Of the total negative findings, 70 percent were environmental and 30 percent involved management issues.

In September, 1994, an internal environmental compliance assessment was conducted at Fort Ritchie as a follow-up to the external environmental compliance assessment conducted in July, 1992. The internal assessment consisted of a review of the previous assessment and further examination and evaluation of the environmental issues.

2.1.3 Geohydrologic Study of the Post Exchange Auto Service Station, Building 515

In 1991, U.S. Army Environmental Hygiene Agency (USAEHA - now USACHPPM) conducted a geohydrologic study of the Post Exchange Auto Service Station to determine the extent of soil and groundwater contamination. The study was initiated by Fort Ritchie because of concerns related to a fuel release that occurred in 1984. The study found groundwater immediately downgradient of the spill area to be significantly contaminated with gasoline constituents. Detailed discussion on this area is given in Section 4.1.2.

2.1.4 Integrated Natural Resource Management Plan

In August, 1995, Fort Ritchie released the Integrated Natural Resource Management Plan prepared by the U.S. Army Corps of Engineers (USACE), Baltimore District. This document is a five-year plan that would guide the implementation of natural resource management at Fort Ritchie and Site R from 1996 through 2000.

2.1.5 Real Property Master Plan

The Real Property Master Plan developed for Fort Ritchie in 1990 established development objectives and proposals to solve current land use, circulation, and utility service problems. The purpose of the plan was to meet future needs compatible to the missions of the installation.

2.1.6 Environmental Assessment Based on the Real Property Master Plan

An environmental assessment of the Fort Ritchie property was prepared in February, 1993, as part of the installation Real Property Master Plan. The report documented existing environmental conditions on the Fort Ritchie property and addressed potential environmental impacts of the various proposed future developments.

2.1.7 Underground Storage Tank Removal Report, Closure Reports, and Final Action Plan Summaries

The status of Underground Storage Tanks (USTs) on the installation have been documented and summarized in the *Fort Ritchie UST Final Action Plan Summaries*. Information is stored in a database which includes Maryland tank registration number, group description indicating its location and usage (i.e., administration, housing, unregistered housing, or position quarters), building number where the UST is located, year installed, capacity, and product stored in the tank, along with any comments on actions taken. Several versions of the UST summaries were compiled over a period of time; these versions were

² Site R is located in Pennsylvania and not on the Fort Ritchie property. Site R is not within the scope of this EBS report.

compared with each other in order to get a historical record of UST summary plans as well as to identify the most current and updated information.

Removal of USTs in the housing areas was documented in a report by Goode Environmental Services (GES), the contractor who performed the removals. The report identified each of the removed USTs by number and location. Soil sample results, volume of soil removed, monitoring pipe installation procedures, and water sample results were documented in this report. The report detailed the actions involved in removing and disposing of the old tanks and in determining any necessary remedial action.

Closure reports for USTs in the administration area contained documentation on the date of removal, volume of soil removed, presence of contamination, installation of monitoring pipes, and results of water sample testing. Information on spills or any unusual circumstances, such as a sheen on the water table surface, was also recorded in these files. The status of all USTs on the installation are summarized in Table D-1, Appendix D.

2.1.8 Transformer Inventory and Polychlorinated Biphenyl Test Results

The Fort Ritchie installation maintains an inventory of each transformer on site and its PCB testing status and results. The information appears in a database format including the pole number on which the transformer is located, number of the nearest building, capacity of the transformer, manufacturer, serial number, voltage, type, and coolant liquid contained in the transformer. Remarks on whether the transformer is labeled or tested positive for PCBs is included. All unlabeled transformers have been tested, but only the results of two thirds of them were available as of November, 1995. Two PCB transformers have been removed and disposed of as a result of these testing efforts.

An inspection report of PCB-containing equipment conducted by MDE on February 9, 1989, was reviewed. The inspection included a walk-through by a MDE inspector with installation employees and oral exchange of information. Six known nameplate PCB transformers in use and one labeled PCB transformer in storage were identified during this investigation and subsequently removed and disposed of. Capacitors, hydraulic equipment, heat transfer equipment, and electromagnets were checked for PCB-containing materials, but none were found. A comprehensive listing of the PCB status of each transformer on base is given in Table F-3, Appendix F.

2.1.9 Asbestos Survey

An *Asbestos Users Guide and Management Plan* report by Dewberry & Davis presented results of a post-wide asbestos survey conducted between October, 1991, and February, 1992. Asbestos containing materials (ACMs) were identified, located, and quantified. The report recommended a management plan for the Fort Ritchie installation. Details of the sampling results are presented in Table F-1 of Appendix F.

Determination of asbestos abatement and control alternatives is based on the accessibility, condition, and type of ACMs involved. Intact and undisturbed ACM does not pose a health risk because it is not likely to release asbestos fibers into the air. A properly conducted operations and maintenance (O&M) program in many cases can be an appropriate asbestos control strategy, and in some cases, can be more appropriate than removal. When ACMs are properly managed, release of asbestos fibers into the air is prevented or minimized, and the risk of asbestos-related diseases can be reduced to a negligible level. Abatement and management alternatives include removal, enclosure, encapsulation, or O&M.

2.1.10 Lead-Based Paint Test Reports

Three reports document the main testing efforts for lead-based paint (LBP) at Fort Ritchie. A test conducted in 1991 involved 30 representative housing units, some random playground equipment, and a few shed doors behind the housing units. Another effort in 1994 tested 22 miscellaneous administration buildings. Detailed X-ray fluorescence (XRF) testing of all child care facilities was performed in 1995 due to the greater potential risk posed to young children. Some positive results were found in all three investigations.

All three testing efforts recommended further analysis in order to determine which building components should be focused on for an effective LBP abatement effort. Table F-2 in Appendix F lists each building at the installation with its construction date, LBP status, and remarks indicating the test date if tests were conducted, where LBP was found, and where it is assumed to be. All structures constructed before 1978 are assumed to have potential LBP according to USAEC guidelines. This includes all buildings on site except for the new buildings listed in Section 4.4.1. LBP removal and abatement for 11 buildings was initiated in July, 1995, and work is expected to start in spring 1996. The buildings to be abated are 130, 141, 202, 205, and 360. Education and LBP management are currently part of Fort Ritchie's LBP mitigation efforts.

2.1.11 Radon Test Report

Information on radon was obtained from a database summary table created by the Fort Ritchie Department of Public Works (DPW) Office of the Environment from the results of a testing effort in the fall of 1989. The information given for each test location includes test date, building location and usage, location identification, room number, sample identification, and picocurie (pCi) average. Radon was not found to exceed acceptable levels in any test location on the installation.

2.1.12 Radiation Survey

In 1990, USAEHA, now USACHPPM, reviewed Fort Ritchie's environmental radiation protection program. USAEHA also conducted an industrial radiation survey in 1991. Installation records and personnel provided information on radioactive material storage and use. Equipment containing radioactive materials and licenses required were listed. The inspection reports also developed safety and protection policies and procedures concerning operational and personnel movement limitations to limit exposure. A summary of all radioactive equipment, their license, and operation instructions and comments are provided in Table F-4 of Appendix F.

2.1.13 Unexploded Ordnance

Installation personnel, retired employees, and installation records provided information regarding the presence of UXO at Fort Ritchie. An area of the installation designated as the impact area and the area of the new Post Exchange (PX) and Commissary was verified as containing UXO by the above resources and by visual inspection.

2.1.14 Maps and Aerial Photographs Reviewed

The following maps and aerial photographs were reviewed for the EBS report:

- **Fort Ritchie General Site Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.

- **Fort Ritchie Installation Land Use Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie General Recreation Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie General Transportation Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie General Water Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie General Wastewater Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie General Heating Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie General Storm Drainage Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie Regional Map, Existing Conditions.** Corps of Engineers, Baltimore District. November 16, 1990.
- **Fort Ritchie Real Property Environmental Overlay Map, Existing Conditions.** Corps of Engineers, Baltimore District. February 4, 1993.
- **Fort Ritchie, General Site Plan, Proposed Golf Course.** Fort Ritchie Post Engineer. November 6, 1959.
- **Fort Ritchie Power Pole and Transformer Inspection, All Post Including Family Housing.** Fort Ritchie Department of Engineering and Housing. March, 1986.
- **Fort Ritchie Underground Storage Tanks, Administration Area.** Fort Ritchie Department of Engineering and Housing. January, 1990.
- **Fort Ritchie Underground Storage Tanks, Housing Area (Regulated and Unregulated).** Fort Ritchie Department of Engineering and Housing. January, 1990.
- **Fort Ritchie Underground Storage Tanks, Housing - Position Quarters.** Fort Ritchie Department of Engineering and Housing. January, 1990.
- **Fort Ritchie General Site and Building Use Map.** Fort Ritchie Post Engineer. February 13, 1961.
- **Fort Ritchie General Site Map, Oil Burner Locations.** Fort Ritchie Post Engineer. February 23, 1955.
- **Fort Ritchie Site Plan.** Fort Ritchie Facilities Engineer. September 28, 1965.
- **Camp Albert C. Ritchie: The Military Reservation, State of Maryland, Cascade, Washington County, Boundary Lines.** Barrick, Robert F., Major. June 25, 1941.

- **Camp Albert C. Ritchie: The Military Reservation, State of Maryland, Cascade, Washington County, Abandoned Firing Range Locations.** Barrick, Robert F., Captain. October 11, 1934.
- **Maryland National Guard Camp, Cascade, Maryland.** Maryland National Guard. June 11, 1926.
- **Aerial Photography: Fort Ritchie.** Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture. October 24, 1952.
- **Aerial Photography: Fort Ritchie.** Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture. August 21, 1958.
- **Aerial Photography: Fort Ritchie.** Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture. October 15, 1963.
- **Aerial Photography: Fort Ritchie.** Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture. June 14, 1970.
- **Aerial Photography: Fort Ritchie.** Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture. May 22, 1981.
- **Aerial Photography: Fort Ritchie.** Geological Survey, Earth Resources Observation Systems Data Center, U.S. Department of the Interior, Sioux Falls, South Dakota. April 19, 1984.
- **Aerial Photography: Fort Ritchie.** Geological Survey, Earth Resources Observation Systems Data Center, U.S. Department of the Interior, Sioux Falls, South Dakota. April 19, 1994.
- **Aerial Photography: Village of Cascade and Lake from Cascade.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1920.
- **Aerial Photography: Lake Royer, Blue Ridge Mountains, PA.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1920.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1926.
- **Aerial Photography: Officers of Fifth Infantry, Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1928.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. October 30, 1937.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. September 19, 1943.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1948.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. October 24, 1952.

- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. October 15, 1959.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. March 21, 1971.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. April 2, 1981.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1992.
- **Aerial Photography: Fort Ritchie.** National Aerial Resources, Rensselaer Technology Park, Troy, NY. 1994.

2.2 FEDERAL, STATE, AND LOCAL GOVERNMENT REGULATORY RECORDS

A database search of federal and state records for both the Fort Ritchie property and adjacent properties was conducted by Environmental Data Resources on August 29, 1995, and is presented in a report entitled *The Area Study Report* in Appendix G. The database searched for all properties within a 1-mile radius of the Fort Ritchie property for information on the following:

2.2.1 Federal Records

- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS): CERCLIS contains data on potentially hazardous waste sites that have been reported to the Environmental Protection Agency (EPA) by states, municipalities, private companies and private persons, pursuant to Section 103 of CERCLA. CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.
- Emergency Response Notification System (ERNS): ERNS records and stores information on reported releases of oil and hazardous substances.
- National Priorities List (NPL): The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program.
- Resource Conservation and Recovery Information System (RCRIS): RCRIS includes selective information on sites which generate, transport, store, treat, and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).
- Superfund (CERCLA) Consent Decrees: The decrees are major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. They are released periodically by United States District Courts after settlement by parties to litigation matters.
- Corrective Action Report (CORRACTS): CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.
- Facility Index System (FINDS): FINDS contains both facility information and "pointers" to other sources that contain more detail. These include: RCRIS, PCS (Permit Compliance System), AIRS

(Aerometric Information Retrieval System), FATES (FIFRA [Federal Insecticide, Fungicide, and Rodenticide Act] and TSCA [Toxic Substances Control Act] Enforcement System), FTTS (FIFRA/TSCA Tracking System), CERCLIS, DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), FRDS (Federal Reporting Data System), SIA (Surface Impoundments), CICIS (TSCA Chemicals in Commerce Information System), PADS [PCB Activity Database System], RCRA-J (medical waste transporters/disposers), TRIS [Toxic Chemicals Release Inventory System], and TSCA.

- Hazardous Materials Information Reporting System (HMIRS): HMIRS contains hazardous material spill incidents reported to the U.S. Department of Transportation (DOT).
- Material Licensing Tracking System (MLTS): MLTS is maintained by the Nuclear Regulatory Commission (NRC) and contains a list of approximately 8,100 sites which possess or use radioactive materials and are subject to NRC licensing requirements.
- Federal Superfund Liens (NPL Liens): Under the authority granted to EPA by CERCLA 1980, EPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. EPA compiles a listing of filed notices of Superfund Liens.
- PCB Activity Database System (PADS): PADS identifies generators, transporters, commercial stores and/or brokers and disposers of PCBs who are required to notify the EPA of such activities.
- RCRA Administrative Action Tracking System (RAATS): RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions by EPA.
- Records of Decision (ROD): ROD documents mandate a permanent remedy at an NPL (Superfund) site and contain technical and health information to aid in the cleanup.
- Toxic Release Inventory System (TRIS): TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.
- Toxic Substances Control Act (TSCA): TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.
- No Further Remedial Action Planned (NFRAP): As of February, 1995, CERCLIS sites designated NFRAP have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action. EPA has removed approximately 25,000 NFRAP sites from CERCLA in order to lift the unintended barriers to the redevelopment of these properties. The site information has been archived as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors, and affected citizens to promote economic redevelopment of unproductive urban sites.

- Federal Reporting Data System (FRDS): FRDS provides information regarding public water supplies and their compliance with monitoring requirements, maximum contaminant levels (MCLs), and other requirements of the Safe Drinking Water Act (SDWA) of 1986.

2.2.2 State of Maryland Records

- Leaking Underground Storage Tank (LUST) Incident Reports: LUST records contain an inventory of reported leaking underground storage tank incidents which need remediation.
- State Hazardous Waste Sites (SHWS): SHWS records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. These include sites listed under Maryland's Voluntary Remediation Program.
- Solid Waste Facilities/Landfill Sites (SWF/LS): SWF/LS records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. In Maryland, these sites may be active or inactive facilities or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.
- Registered Underground Storage Tanks (UST): UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the MDE, the state department responsible for administering the UST program.
- Permitted Above-ground Storage Tanks (AST). ASTs are regulated by the MDE.
- Maryland Community Public Water Supplies: Information on public water supplies is available from the MDE.

2.2.3 Historical and Other Databases

- Area Radon Information: The Nation Radon Database has been developed by the EPA and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986-1992. Where necessary, data has been supplemented by information collected by private sources such as universities and research institutions.
- Sensitive Receptors: This database contains information regarding individuals who, due to their fragile immune systems, are deemed to be especially sensitive to environmental discharges. These individuals typically include the elderly, the sick, and young children. Facilities where sensitive receptors are likely to be located include schools, hospitals, day care centers, and nursing homes.
- USGS Water Wells: In November, 1971, the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data include information on more than 900,000 wells, springs, and other sources of groundwater.
- Flood Zone Data: These data, available in select counties across the country, are obtainable from the Federal Emergency Management Agency (FEMA). Data depict 100-year and 500-year flood zones as defined by FEMA.

2.3 VISUAL INSPECTIONS

A visual inspection of Fort Ritchie and adjacent properties was conducted from August 21 to 25, 1995. The inspection included automobile drive-through and walk-through surveys of areas in which CERCLA-regulated and non-regulated substances may be or have been stored, released, or disposed. Contamination sources were noted and other evidence of releases were observed. On-site workers also provided information about on-going practices regarding the use, storage, release, or disposal of hazardous substances and petroleum products.

2.3.1 Inspection of Fort Ritchie Property

ICF KE personnel visually inspected the Fort Ritchie property during the week of August 21, 1995, to identify areas with potential environmental issues. Summaries of the areas of concern are presented in the following subsections.

2.3.1.1 Petroleum Storage, Release, or Disposal

Fort Ritchie has recently completed a comprehensive evaluation of all underground storage tanks. Additional information regarding storage tanks and pipelines were gathered from Fort Ritchie records and state records. The location, volume, past and present conditions, and evidence of removal actions of underground storage tanks were verified during the site inspection to the extent practicable.

Areas that were identified in installation documents and interviews with current and past employees as locations where release of petroleum products may have occurred were inspected visually. Evidence of spills, such as discoloration, unusual odors, stressed vegetation or wildlife, and presence of a sheen on nearby water bodies, were looked for.

2.3.1.2 Hazardous Substance Storage, Release, or Disposal

Areas and buildings where hazardous substance storage, use, or disposal currently or previously may have occurred, were visually inspected. Information on storage was gathered from an *Oil and Hazardous Substance Spill Prevention Control and Countermeasure Plan* (1994) and other installation records. Information regarding hazardous waste management, wastewater discharge activities and spill history were reviewed and substantiated, as practicable, during the site visit.

2.3.1.3 Non-CERCLA Issues

PCBs: Information regarding PCB-containing items and PCB leaks was obtained from various PCB surveys and inspection reports. Areas suspected to have been contaminated by PCBs based on inspection and survey reports were visually inspected.

Lead-Based Paint: ICF KE staff conducted a walk-through of housing and office buildings to verify the presence of lead-based paint. Representative housing units and various randomly-chosen buildings have been tested for the presence of LBP. Information on the status of LBP in buildings was determined by the results of these inspections and tests and also from USAEC guidelines, which assume that all structures constructed before 1978 have LBP.

Asbestos-Containing Material: A report of an asbestos survey conducted between 1991 and 1992 provided information on the presence of asbestos-containing material at Fort Ritchie. Visual verification of asbestos during site walk-throughs was not done for ACMs; however, during visual inspection of

representative buildings and boiler rooms, ICF KE did not observe areas where friable ACMs were a problem.

Radon: As previously noted, information on radon at Fort Ritchie was obtained primarily from a report on radon testing conducted in the fall of 1989.

Unexploded Ordnance (UXO): An area of the installation designated as a UXO impact area was verified as containing UXO by visual inspection of the fencing and warning signs. Installation personnel, retired employees, and installation records provided information regarding the presence of UXO.

Radionuclides: Locations where radioactive materials are stored or in use were inspected. These locations were obtained from installation records and from surveys conducted by USAEHA.

2.3.2 Inspection of Adjacent Properties

Federal and state databases were searched to identify small- and large-quantity hazardous waste generators, underground storage tanks, and leaking underground storage tanks at adjacent properties. A search of county real estate files and information from county personnel and former employees provided additional information. A drive-through of properties adjacent to Fort Ritchie and a visual inspection of possible areas of environmental concern were conducted in August, 1995.

2.4 INTERVIEWS

Mr. Bill Hofmann and Mr. Phil Marne, current employees with DPW, were interviewed as part of the on-site inspection. Informal questions were also asked of current employees during the August, 1995, site visit about on-going practices regarding the use, storage, release, or disposal of hazardous substances and petroleum products. Three former employees, Mr. Thomas Olsen, Mr. Paul Mummert, and Mr. Thomas Gilbert, were interviewed to verify past environmental management practices and any other activities that may have impacted the environmental condition of the Fort Ritchie property. Mr. Olsen worked in the Sanitation Department between 1952 and 1970 and as a Maintenance Supervisor from 1970 until he retired in 1985. Mr. Mummert worked as a pest controller between 1964 and 1994. Mr. Gilbert worked for the government between 1972 and 1986, and afterward for the operations and maintenance contractor until 1995. The interview reports are presented in Appendix H.

2.5 TITLE DOCUMENTS

A review of tract maps and transfer documents was conducted to identify former property owners at the time of land transfer to the Army. This review was conducted to determine prior usage of the property and environmental conditions at the time of transfer. Information was obtained from Fort Ritchie, Washington County, and the USACE, Baltimore District. The most current tract map for the Fort Ritchie property is presented in Appendix I.

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3.0 PROPERTY CHARACTERIZATION

This chapter presents a general description of the Fort Ritchie property and surrounding area. The location and history of the installation are presented along with a description of the tenant activities which operate on the facility. The status of environmental permits is also discussed.

3.1 GENERAL PROPERTY INFORMATION

General information on the Fort Ritchie property was compiled from the resources described in Chapter 2. Information on the physical setting, history, and tenant activities of Fort Ritchie is presented below. A site map is provided in Figure 3-1.

3.1.1 Physical Setting

Fort Ritchie is located approximately one mile south of the Maryland/Pennsylvania border in Washington County, Maryland. It is situated near the upper end of a small valley at the foot of Quirauk Mountain, in the Catocin Range of the Blue Ridge Mountains. The installation comprises approximately 631 acres, with slightly more than half of the property developed (USACE, 1995). The developed areas include administrative buildings, a helipad and parade grounds, maintenance facilities, community facilities (i.e., chapel, library, youth development center, etc.), and family and troop housing, and are concentrated in the central and northeastern portions of the facility. Undeveloped areas are heavily wooded, with freshwater streams and wetlands, and are concentrated in the southern and western portions of the installation. There are two lakes, Lake Wastler (Upper Lake) and Lake Royer (Lower Lake), located in the northern portion of the installation and a freshwater stream and a wetland located in the southern portion of the installation.

3.1.2 Property History

The present site of Fort Ritchie was first developed as a resort community in the late 1800s. Lake Royer was constructed by the Buena Vista Ice Company to provide a summer recreational area and to produce ice during the winter. Residential buildings and ice storage facilities were also constructed during this time but have since been demolished.

Five hundred and eighty (580) acres of the site were purchased by the State of Maryland in 1926. Camp Ritchie was established on the property and was utilized as a brigade training area for the Maryland Army National Guard. The first permanent buildings were constructed on the installation during this time. These buildings were mainly constructed of stone and timber resources acquired from surrounding locales, and most remain standing at this time.

During World War II (WWII), Camp Ritchie was leased by the U.S. Army and utilized as the War Department Military Intelligence Training Center (MITC). The Army constructed 165 buildings on the installation during the WWII era to provide housing and training areas; most of these WWII era buildings are still standing. A total of 20,000 intelligence troops were housed and trained at Camp Ritchie between 1942 and 1945. Some of the training activities included firing of ordnance into the hillsides in the western section of the installation. Thus, much of the wooded portions of the base are impact areas, potentially containing UXO. Acquisition of additional adjacent acreage increased the installation size from 580 to 631 acres by 1940 and to the present 637.57 acres by 1988. On August 18, 1993, 6.36 acres comprising the wastewater treatment plant was transferred to the Washington County Sanitary District. A property acquisition map is presented in Appendix I.

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In 1945, the MITC was de-activated, and the State of Maryland re-instituted Camp Ritchie as a National Guard Training Station. In 1948, the Army again acquired control of Fort Ritchie for the purpose of providing support for the AJCC located at Site R (USACE, 1993). Support of the AJCC has been the primary mission of Fort Ritchie since the mid-1950s. Additionally, Fort Ritchie provides housing and morale support to Camp David and to the Naval Support Facility in Thurmont, Maryland. Finance and accounting services for the White House Communications Agency, Military Traffic Management Command, and other designated subordinate activities are conducted on the installation. Fort Ritchie is also the lead federal agency supporting the City of Hagerstown, Maryland, Cooperative Administrative Support Unit initiative.

3.1.3 Tenant Activities

Several tenant agencies operate at Fort Ritchie. In general, all of the activities are administrative or communications related, and there are no major activities that handle hazardous materials. These agencies and their primary missions are described below:

- **AJCC and National Military Command Center (NMCC) Complex (Site R):** The AJCC and NMCC Complex is located six miles northeast of Fort Ritchie, in southern Pennsylvania, at Site R. Tenants at this location represent each of the military departments and the Joint Chiefs of Staff. The 1111th Signal Battalion is also headquartered at Site R, though its support company is stationed at Fort Ritchie. Personnel at Fort Ritchie provide housekeeping, logistical, and engineering support to tenants of Site R.
- **Headquarters, 1108th U.S. Army Signal Brigade:** The 1108th Signal Brigade evaluates information systems and develops and conducts testing strategies and methodologies for information systems for the Army's long-range communications plans. This tenant is also responsible for restoring Army communications in the event of a national emergency.
- **Headquarters, U.S. Army Information Systems Engineering Command - Continental United States (ISEC-CONUS):** ISEC-CONUS engineers, installs, and tests information systems equipment and facilities within the continental United States, Alaska, Puerto Rico, and Panama.
- **Headquarters, U.S. Army Information Service Center (AISC):** AISC provides information products and services to the Army. AISC is the primary entry point for accessing all Department of Army information infrastructure services and products.
- **Defense Information Systems Agency - Western Hemisphere (DISA):** DISA, formerly known as 7th Signal Command, provides information products and services to the Department of Defense. DISA is the primary entry point for accessing all Department of Defense information infrastructure services and products.
- **U.S. Army Health Clinic:** This organization occupies Building (Bldg) 341 and provides health care services to military personnel and military dependents stationed at the installation.
- **U.S. Army Dental Clinic:** This organization occupies Building 332 and provides dental care services to military personnel and military dependents stationed at the installation.
- **902 Military Investigative Group:** This group is an investigative organization which operates independently from the military police unit on the garrison. Their primary mission is to inquire into internal military incidents.

3.2 PERMITTING STATUS

The Fort Ritchie property operates under federal, state, and local regulations in accordance with the property's environmental permits. The status of these permits and brief description of related activities are outlined in this section.

3.2.1 Resource Conservation and Recovery Act Status

Fort Ritchie is classified as a small quantity hazardous waste generator, EPA identification number MD8210020758 (USACE, 1993). Permitted activities at Fort Ritchie that are regulated under the provisions of RCRA include storage and use of hazardous substances and generation, storage, and disposal of hazardous wastes. Hazardous substances used at Fort Ritchie include solvents, petroleum products, flammable liquids, herbicides, pesticides, fungicides, and others. Records on storage or use of hazardous substances are submitted periodically to the Environmental Management Office of the Directorate of Public Works (DPW) by the individual organizations located in each building on the installation. An installation-wide inventory of hazardous substances is compiled from this information and kept on file at DPW. Hazardous substances inventories, hazardous waste shipping manifests, and employee interviews were used to develop the synopsis of the hazardous substances/waste management at Fort Ritchie, presented in this section. Summaries of hazardous substances use and storage locations, waste generation and shipment, and history of releases are presented in Tables B-1, B-2, and B-3, respectively, in Appendix B.

3.2.1.1 Use and Storage of Hazardous Substances

Hazardous substances are stored and/or used in about 26 buildings throughout the installation. As a small quantity generator, Fort Ritchie is not permitted to store hazardous wastes for long term periods. Management of hazardous substances at Fort Ritchie has historically focused on utilizing as much of the hazardous item as possible, then transporting unusable or unwanted portions to an off-site treatment, storage, and disposal facility (TSDF). Hazardous wastes have been manifested at least since 1982. The major hazardous substances used at Fort Ritchie, the locations of use, and the organizations involved in the use of hazardous substances are summarized in Table B-1, Appendix B.

3.2.1.2 Disposal

Disposal of the majority of hazardous wastes generated at Fort Ritchie is handled under a shipping contract administered by the Defense Reutilization and Marketing Office (DRMO). Small quantities of wastes were generated at the photographic laboratory (Building 301). All of the wastes were either disposed of through the DRMO or were neutralized before discharge into the sanitary sewer. Hazardous wastes generated at Fort Ritchie are collected and temporarily stored at two hazardous waste sheds at Building 837. This location serves as a redistribution center and as the pick-up location for hazardous items that become classified as waste (Marne, 1995). Prior to 1989, hazardous substances were collected for shipment on pallets in Building 700. Containerized wastes are shipped to various TSDFs in various states. A summary of regulated hazardous wastes generated by and shipped from Fort Ritchie is presented in Table B-2, Appendix B.

3.2.1.3 Release

Documentation of hazardous substance spills at Fort Ritchie are kept on file at the installation for the years 1993-95. Based on the information contained in these files, a total of 13 spills have occurred from April, 1993, through May, 1995. There are records of two spills occurring before 1993. One spill occurred at the housing units and one paint spill occurred at Lake Royer in 1991. Types of substances spilled include No. 2 fuel oil, waste oil, diesel fuel, and hydraulic fluid. In each case, the quantities that

were released were relatively small (0.5 to 310 gallons), and actions were taken in accordance with the Fort Ritchie *Installation Spill Contingency Plan* to minimize the extent of environmental release of the spilled substance. The history of hazardous substance spills and remediation efforts is presented in Table B-3 in Appendix B.

3.2.2 Comprehensive Environmental Response, Compensation, and Liability Act Status

As described in Section 2, federal, state, and local government regulatory records were reviewed for the EBS. A search of federal and state databases containing information on regulated environmental sites or activities (i.e., Superfund sites, hazardous waste disposal sites, locations of previous corrective actions, etc.) was also conducted (Appendix G) and indicated that there are no NPL sites on Fort Ritchie nor on the adjacent properties. Further, a search of the title documents of Fort Ritchie and the surrounding properties confirms that no heavy industrial activities or potentially hazardous dumping is likely to have occurred. Based on these results, no areas on or adjacent to Fort Ritchie are regulated under the provisions of CERCLA.

3.2.3 National Pollutant Discharge Elimination System Permit

The Clean Water Act (CWA) regulates the direct discharge of any pollutant, or combination of pollutants, into the waters of the United States from a new or existing point source. The reporting requirements and pollutant characteristics (e.g., rate and concentration) of these discharges are regulated under the National Pollutant Discharge Elimination System (NPDES) permit program.

Fort Ritchie currently has two permitted surface water discharge points located at the Water Treatment Plant (Building 835) and at the Motor Pool (Building 700). The outfall at Building 835 is permitted under NPDES permit MD-0003221 and State of Maryland discharge permit 91-DP-2516 to discharge into Lake Royer. The water treatment facility at Building 835 is used to treat water from the on-site lakes to supplement water supply when demand exceeds well water and spring water production during the summer and other peak demand periods. The water treatment facility is reportedly not being used because of adequate water production from the wells. Information contained in the monthly discharge reports for this facility as of August, 1995, indicate no discharge has occurred from this location in the last calendar year. The outfall at the Motor Pool discharges through an oil-water separator to Lake Wastler at the NPDES permitted discharge point.

Five oil-water separator units currently exist at the installation. These units, located at the Auto Craft Shop (Building 401), the Vehicle Wash Rack (Building 731), the Post Exchange Gas Station (Building 515), the Motor Pool (Building 700), and the Fire Station (Building 519), discharge into the sanitary sewer system, and effluents are treated prior to release to a surface water body. Thus, no NPDES permits are required for these units.

Fort Ritchie has submitted an application (through the Department of Army application process) to acquire an installation-wide stormwater permit. All applicable contracts at the installation include appropriate erosion and sediment control plans (USACE, 1993).

3.2.4 Solid Waste Permits

Fort Ritchie has no permitted landfill on site. Non-recycled, non-hazardous solid waste is hauled off the site by various operations & maintenance contractors since 1986. Prior to 1986, waste was hauled off site by Federal Government employees. The truck operator records the volume in cubic yards at each pickup point and transports all waste to the Washington Township, Pennsylvania, transfer station. The transfer station is operated by a private contractor who then transports wastes to a state-sanctioned

landfill in Chambersburg, PA. The truck is weighed at the transfer station. In 1989, 27,000 cubic yards of solid waste were generated. The installation estimates that it currently generates about 100 tons of refuse per month in regular household waste (i.e., paper, plastics, glass, metal, food, office supplies, yard and grounds waste). A recycling program was initiated in 1990. Approximately 20 tons of newspaper, metal cans, plastics, office paper, glass, and cardboard are recovered monthly. Additionally, grass clippings and clean fill are disposed of at designated locations along Reservoir Road.

In the past, on-site incinerators were used to dispose of solid waste. The original stone incinerator, Building 907, was constructed in the 1930s and operated into the 1940s. Typical solid wastes, including small quantities of miscellaneous chemicals, were placed directly into the incinerator and burned. No separate storage area or staging areas were used prior to the waste being burned. No startup fuels were used in the incineration process during this time period. Ash was deposited in two areas, one along Wise Road and the other near the former Skeet Range, and was routinely covered with soil (Olsen, 1995). A new replacement incinerator, Building 908, was constructed in the 1950s and had a capacity of 3500 lbs/hr. Fuel oil (No. 2 oil) stored in a 275-gallon above-ground tank was used for startup fuel for this incinerator. During operation, approximately 2000 gallons of No. 2 fuel oil were used monthly. In 1973, the incinerator was retrofitted with an air pollution control device which reportedly had maintenance problems. As a result, the burner was shut down shortly thereafter.

Fort Ritchie owned and operated a wastewater treatment facility until August 31, 1993, when ownership and operations were transferred to Washington County. Digested sewage sludge from this facility was disposed of under MDE permit to local farmland and/or in the Washington County Sanitary Landfill. Transport and disposal of the sludge were administered by various contractors, including ColeJon Corporation.

3.2.5 Air Permits

Fort Ritchie is located in an unclassified/attainment area for carbon monoxide (CO) and particulate matter less than ten microns (PM_{10}). It is also within the Northeast Ozone Transport Region, defined by the EPA, which places the installation in a moderate ozone nonattainment area. Title I of the Clean Air Act Amendments of 1990 requires facilities within an ozone nonattainment area which emit more than 50 tons per year of volatile organic compounds (VOC) or 100 tons per year of nitrogen oxides (NO_x) to submit an Emission Statement to local authorities. Fort Ritchie is not required to submit an emission statement at this time because it does not exceed these emission standards. However, an inventory of air emissions was conducted at Fort Ritchie, consistent with the requirements of Code of Maryland Regulations (COMAR) 26.11.15.03, and submitted to USAEC as a final report in September, 1994. This inventory presented a quantification of actual emissions of criteria pollutants and hazardous pollutants emitted at the installation during the base year 1992, and was written so that it could be used as an emission report.

Various locations on the installation have been identified as sources of emissions at Fort Ritchie. Excluding mobile sources and sources of chlorofluorocarbons (CFCs) or halon, the emission sources at Fort Ritchie include boilers, generators, above-ground and underground storage tanks, a gasoline service station, degreasers, welding and woodworking operations, incinerators, an indoor firing range, and areas in which pesticides are applied. The annual emission of VOCs, NO_x , CO, sulfur oxides (SO_x), PM_{10} , and total suspended particulates (TSP) were calculated for each of these source categories, excluding the indoor firing range and the incinerators, during the air emissions inventory. According to these calculations, SO_x and NO_x account for the largest percentages of air emissions from the Fort Ritchie installation. A summary of the annual emissions at Fort Ritchie is presented in Table C, Appendix C.

Ozone depleting substances (CFCs/refrigerants/halon) have also been inventoried, and an installation-wide refrigerant management plan has been devised. The refrigerant management plan calls for systematic replacement of all equipment containing CFCs as funds become available. A total of 75 buildings throughout the installation are reported to have air conditioning units and/or water coolers which contain ozone-depleting substances, that will need to be replaced. All hand-held halon fire extinguishers have been removed from service. Sprinkler systems constitute the major potential source of halon emissions remaining on the installation. These systems cannot be taken out of service until new ones have been installed.

3.2.6 Water Supply Permits

The SDWA of 1974 was established to assure safe drinking water in public water systems and provide for protection of underground drinking water sources. Drinking water for the installation is regulated under the SDWA, and monitoring reports on drinking water quality are reported to MDE Public Water Supply (PWS) Program under PWS permit No. 0210007.

Drinking water for the installation is currently supplied by a system of one spring and eight production wells. Water from these sources is collected in a one million gallon reservoir and a 300,000-gallon reservoir which are located in the southwestern and southeastern ends of the installation, respectively. Analysis of drinking water supply samples includes information on nitrates, nitrites, metals, and various organic compounds. Information contained in water sample analysis reports (dated August, 1992, to June, 1994) indicated that no organic compounds have been detected in the drinking water supply, and all detected metals, nitrates, and nitrites have been within maximum contaminant levels established by the EPA.

Until January, 1990, there were two springs located in the southwestern portion of the installation which produced a combined average of 80,000 gpd. In 1989, contamination of the drinking water supply with an intestinal parasite (*Giardia*) was suspected after three cases of *Giardia* were reported in one family residing at Fort Ritchie. Water samples from both water supply springs were tested for presence of *Giardia* cysts, and none were found. Spring No. 1 was identified as the most likely source of contamination because surface water runoff, which could potentially contain cysts of the parasite, could infiltrate the spring box. Although no parasites were detected in spring No. 1 water samples, it was taken out of use. No additional cases of *Giardia* have been reported since the initial occurrence.

In 1991, USAEHA conducted a hydrologic study to determine the extent of soil and groundwater contamination at the Post Exchange service station (Building 515). The study found benzene concentrations of 7,230 $\mu\text{g/l}$ in the shallow aquifer at monitoring well No. 2 close to the release site. This is above the MCL for drinking water (MCL for benzene = 5 $\mu\text{g/l}$). Although contamination had not been found in the deep aquifer, the study also recommended permanently sealing a nearby Water Supply Well No. 3 to preclude any fuel-related contaminants from migrating deeper into the aquifer along the annulus of the well. Well No. 3 was permanently closed and the wellhouse demolished in 1992 in accordance with MDE standards.

3.2.7 Underground Storage Tanks

About 300 USTs (primarily containing No. 2 fuel oil) have been documented to exist at one time on the Fort Ritchie property according to UST Action Plan summaries. Numerous tanks have been replaced, removed and/or abandoned throughout the history of the site. As of August, 1995, 71 USTs, most of which contain No. 2 fuel oil, exist at the installation. All currently existing tanks were installed within the last five years and are currently registered with the State of Maryland. The original single-walled, steel tanks were replaced by double-walled fiberglass tanks. All UST removal and remedial actions

implemented at Fort Ritchie since the 1980s were supervised and approved by MDE (Hill, 1995). Detailed information on all underground storage tanks are presented in Table D-1, Appendix D.

Tanks were replaced at Fort Ritchie at a rate of approximately ten tanks per year until 1990. During this period, the criteria for replacing or removing a tank depended on its age or if leaks were suspected based on weekly dip stick measurements (Gilbert, 1995).

Between 1989 and 1990, a complete regulatory assessment of USTs at the installation was conducted. Based on this assessment, a basewide removal/ replacement action was implemented. From 1991 to 1992, GES removed 59 USTs containing No. 2 fuel oil from the 400 housing area including ten USTs that were identified as abandoned tanks. Overall, a total of 186 housing USTs were removed from the base between 1991 and 1995. Residual liquid was pumped out of the tanks and disposed of at an off-site facility. Soil samples were obtained from the bottom of each UST excavation in order to evaluate subsurface conditions. Headspace vapor analyses were performed on each of the soil samples using a photo-ionization detector (PID). Based on visual observations and PID readings, suspect samples that appeared to contain petroleum constituents were submitted to an independent chemical laboratory for analyses for total petroleum hydrocarbons (TPH).

In instances where contaminated soil was suspected, the soil was excavated. Grab samples were obtained from the base of excavations and analyzed for TPH. Four-inch polyvinyl chloride (PVC) monitoring pipes were placed 2 feet below the tank excavations where additional contamination was suspected. Excavations were then backfilled with No. 6 crusher run stones and compacted in one-foot lifts. The sites were covered with top soil, raked, seeded, fertilized, and covered with an erosion resistant netted blanket. Contaminated soil was removed from the site, incinerated, and reclaimed.

During the implementation of the basewide removal/replacement action, about 12% of all regulated, unregulated, and position quarters housing area tanks required remedial actions. Spill events were recorded at housing unit 486 from two tanks and at unit 724. Both incidents were leaks, and sorbents were used to cleanup the leaks, soil samples were collected, and monitoring pipes were installed.

Eighty-five (85) USTs identified by the tank number as administration tanks were excavated and four (4) USTs were abandoned in place; 70 of these USTs were replaced with new tanks between 1991 and 1995. Four (4) of the replaced tanks were later removed. Upon excavation, a visual inspection of the tanks for pitting, holes, and corrosion was performed. Other evidence of release such as overfilling, was documented (Hill, 1995). Two-thirds of all USTs identified as administration tanks indicated a release of petroleum product and required remediation. Spills were recorded at the Golf Course Maintenance Building 5, the Service Station Building 515, and the Motor Pool Building 700. Remediation was conducted as described above. All excavated tanks were cut up and transported off site for disposal.

3.2.8 Aboveground Storage Tanks

A total of six (6) ASTs are known to have been on the installation at one time or another. Two ASTs have since been removed. One AST was removed from Building 502, the old Fire Station, in 1986, and one AST was removed from Building 101, the Exchange Store, in 1993. There are currently four ASTs remaining. Two ASTs at the Auto Craft Shop (Building 401) contain waste oil and waste antifreeze, and two ASTs in the DPW maintenance yard in the Building 900 Area contain diesel and gasoline. One of these tanks was originally associated with the "new" incinerator. No record of spills occurred at any of these tanks. Detailed information on each AST is given in Table D-2, Appendix D.

3.3 SURROUNDING ENVIRONMENT AND LAND USES

This section summarizes the environmental characteristics and resources of the Fort Ritchie property and surrounding area. Demographics and land use are presented along with descriptions of the local climatology, topography, hydrology, water use, physiography, geology, and hydrogeology. Sensitive environments, cultural resources, and natural resources are also discussed. A summary of the natural and cultural resources at Fort Ritchie is presented in Table E, Appendix E.

3.3.1 Demographics and Land Use

Fort Ritchie has a combined military and civilian work force of approximately 2,300 personnel. It is located in a mountainous area within a rural-residential setting in the southwest corner of the town of Cascade in Washington County. Three other small townships, Highfield, Pennersville, and Blue Ridge Summit, are located within 1 mile northeast of the installation. Cascade is an older retirement resort area with no industrial activities and limited commercial activities. Single-family homes are situated along Ritchie Road, on the southwestern border of the installation. Several parks and natural areas are in close proximity to the installation, including South Mountain State Park, Catoctin Mountain National Park, Cunningham Falls State Park, and Machaux State Park in Pennsylvania.

Washington County contains nine municipalities, and has a total population of 85,948 (EDC, 1995). The largest population center in Washington County, approximately 20 miles southwest of Fort Ritchie, is the city of Hagerstown, with a population of 35,445. Total population of the county is expected to approach 100,000 by the year 2020 (EDC, 1995).

3.3.2 Climatology

The average temperature in Washington County is between 50 and 55 degrees Fahrenheit. Data compiled at the National Climatic Data Center indicate the 30-year trend of the two weather stations closest to Fort Ritchie have an average January temperature low of 32.4 degrees Fahrenheit and an average July maximum temperature of 74.4 degrees Fahrenheit. The first freeze date generally occurs in early October; the last freeze date usually occurs from late April to early May.

The prevailing winds in Washington County are from the northwest from October through April, and from the south in the other months of the year. The highest wind velocities are generally recorded during the winter months. Precipitation levels recorded in Hagerstown, MD, indicated an average annual rainfall of 38.8 inches and an average monthly rainfall of 3.2 inches. The greatest amounts of rainfall are generally recorded in June (average of 3.92 inches); the smallest amounts are generally recorded in February (average of 2.26 inches) (USACE, 1993). Snowfall in Hagerstown averages 26.7 inches per year. Snowfall generally occurs from November through January, with January receiving the largest amount of snow and November receiving the least amount of snow (USACE, 1993).

3.3.3 Topography

Fort Ritchie is located near the upper end of a small valley. The terrain is steep and stony on the western or undeveloped portion of the facility and relatively level on the eastern or developed portion of the facility. Elevations range from 2,050 feet above mean sea level (msl) along the western border of the installation to approximately 1,320 feet msl near the facility's two lakes. The western and southern areas of the installation are woodland areas with excessive stones, shallow bedrock, and erosion hazards (USACE, 1993).

3.3.4 Hydrology

Fort Ritchie is located within the Potomac River watershed, which constitutes a major tributary to the Chesapeake Bay. Small springs and groundwater seeps are common along the slopes and at the bases of the mountains which surround the installation. The surface water runoff from the base and surrounding area flows into channels, ditches and culverts at the installation, and collects in Lake Wastler and Lake Royer. These lakes have a combined holding capacity of 79 million gallons of water. The Lake Royer discharges into the South Fork of Falls Creek, which flows northwest into Pennsylvania (USACE, 1993).

Falls Creek, in turn, empties into the east branch of Antietam Creek, which turns south and reenters Maryland. Antietam Creek is the largest freshwater stream in the Fort Ritchie area, with a watershed of approximately 187 square miles. Monthly discharge records for Antietam from a three-year period, collected near Waynesboro, PA, indicated an average flow of 1.14 to 1.59 cubic feet per second per square mile (USACE, 1993).

3.3.5 Water Use

The water supply at Fort Ritchie is derived from eight wells and one spring. The two lakes are supplemental water sources. A maximum of 522,000 gallons per day (gpd) is available with all sources operating continuously.

The eight wells are the primary sources of water for Fort Ritchie. The average output from these wells is 270,000 gpd, with the yield from individual wells averaging 37 gpm (USACE, 1993). The wells that supply the Fort Ritchie drinking water system are 187 to 402 feet deep and yield 27 to 55 gpm (Slaughter, 1962). The well water is treated with soda ash, chlorine, and fluoride at the source and stored in a 1,000,000-gallon covered ground reservoir and a 300,000-gallon covered ground reservoir prior to routing to the water distribution system. The spring located in the southwestern portion of the facility supplies the 1,000,000-gallon reservoir.

Water from the lakes is routed through the water treatment plant (Building 835) to the distribution system during the summer and other peak demand periods. The lakes are primarily used for recreational purposes. The combined capacity of the lakes is 79 million gallons.

3.3.6 Physiography and Soils

Fort Ritchie lies within the Blue Ridge District of the Appalachian physiographic province. This district is approximately three miles wide and consists of Catocin and South Mountains and their intervening valleys. Elevations within the Blue Ridge District reach a maximum of 2,145 feet at the peak of Quirauk Mountain.

The soils in the Fort Ritchie area are mainly upland soils, which developed in place from materials weathered from the underlying rock. The Dekalb-Leetonia-Edgemont-Laidig soil association dominates the Fort Ritchie area. This is a shallow soil, which extends to bedrock, and consists of very stony, moderately coarse-textured to medium-textured soils. Parent materials for these soils are mainly sandstones and quartzites. These soils are strongly to very strongly acidic and are generally nonproductive for agricultural purposes (Slaughter, 1962).

3.3.7 Geology and Hydrogeology

The Catoctin rock formation was formed during the late Precambrian era through volcanic activity that occurred in northern and central Virginia, Pennsylvania, Maryland, and eastern West Virginia. The Catoctin Metabasalt is composed of metamorphosed volcanic greenstone, purple slate, and tuffaceous rock. This formation is underlain by highly metamorphosed Precambrian granite gneiss and metabasalt, and metamorphosed Cambrian shale and sandstone. Outcrops of the Catoctin Metabasalt are found within the Fort Ritchie installation. Quartzite outcrops can also be observed on the installation, primarily in the undeveloped western portions of the post. The thickness of the Catoctin Metabasalt and the Precambrian basement rocks ranges over 1,000 feet in Washington County (Slaughter, 1962).

The geology in the Fort Ritchie vicinity is characterized by asymmetrical folds and fractures. Rock deformation is greatest along the west flank of South Mountain, where complex fracture systems now exist. Rock cleavage patterns in the immediate area are often at angles to the bedding planes. The extent and distribution of the fracture within the Catoctin formation, as well as the rock cleavage patterns, strongly influence groundwater movement. The Precambrian metabasalt, which underlies the Catoctin formation, is characterized by a low water storage capacity. In general, productive wells in this water province yield 40 to 50 gpm. The most productive wells in the Catoctin formation, as well as the rock cleavage patterns, strongly influence groundwater movement (Slaughter, 1962).

The surficial aquifer at Fort Ritchie is less than five feet below the ground surface in some areas. Springs are commonly found on the installation, emerging at points between weathered and fresh strata.

There are no known or inferred geologic faults in the vicinity of Fort Ritchie. There is no evidence of subsidence, though solution cavities are known to exist.

3.3.8 Sensitive Environments

As described in Section 3.3.1, Fort Ritchie is surrounded by wooded areas and residential development with limited commercial activity. Thus, the predominant habitats found in the Fort Ritchie area are woodlands and agricultural areas. The woodlands are dominated by deciduous tree species, including oak (*Quercus* spp.), hickory (*Carya* spp.), maple (*Acer* spp.), tulip poplar (*Liriodendron* spp.), and black gum (*Nyssa* spp.). Due to the history of agricultural land use in the Fort Ritchie vicinity, no old-growth forest habitat is likely to occur.

There are several protected wildlife areas in close proximity to Fort Ritchie, including South Mountain State Park, Catoctin Mountain National Park, Cunningham Falls State Park, and Machaux State Park in Pennsylvania. These areas support a variety of wildlife, including black bear (*Ursus americanus*), white-tailed deer (*Odocoileus virginianus*), red squirrels (*Tamiasciurus hudsonicus*), red fox (*Vulpes*), Eastern cottontail (*Sylvilagus floridanus*), and others. The Fort Ritchie area is located along the western periphery of the Atlantic flyway used by migrating waterfowl, waterbirds, and neotropical migrants.

Surveys of natural and cultural resources on the Fort Ritchie installation have recently been conducted, and some of these surveys are ongoing at this time. These survey efforts include an inventory of vascular plants and vertebrates, a jurisdictional wetland delineation, and a comprehensive investigation of historic and archaeologic sites that occur on the installation. Preliminary findings from these investigations indicate that several sensitive environments occur on the installation. Results of these surveys, available to date, are summarized in Table E in Appendix E. Each of these survey efforts is described in detail below.

3.3.8.1 Vegetation

An installation-wide survey of vascular plants is being conducted by staff from the Center for Ecological Management of Military Lands (CEMML), a Department at Colorado State University. Initial data collection for this survey began in the summer of 1993, and field efforts were completed in the summer of 1995. The report of findings for this field effort are expected in early 1996, and will include descriptions of methodologies and findings. Data collected during field efforts include the identification of species, relative abundance of species, habitat descriptions, and determination of species status. Forest stand delineations are also being conducted at Fort Ritchie. These delineations are intended to identify sections of wooded areas that are suitable for forest management, based on species composition, age, and size classes. Results of the vascular plant survey, forest stand delineations, and recent aerial photos will be used to create a vegetation map of the installation.

3.3.8.2 Wildlife

Baseline surveys of terrestrial invertebrates, including birds, mammals, reptiles, and amphibians, occurring at the Fort Ritchie installation were conducted by Shippensburg University from May through October, 1994. The species of birds utilizing Fort Ritchie habitats were determined through observations made along 24 transects which were established in four major habitat types found on the installation. Mammals were surveyed using traplines that were set up at 33 sampling stations. Four days of surveying were devoted to searching for amphibians and reptiles under rocks and fallen logs. Results of these survey efforts included a list of species, determination of species status, and limited wildlife resource management recommendations.

3.3.8.3 Wetlands

An installation-wide survey and delineation of jurisdictional wetlands was conducted in April, 1992. Jurisdictional wetlands were determined through methodologies outlined in the 1987 version of the *U.S. Army Corps of Engineers Wetland Delineation Manual*. A final report of findings from the wetland delineation field efforts was prepared and submitted in July, 1992. Results of the delineation efforts indicate there is one major complex of wetlands on the installation. This wetland complex consists of the areas immediately adjacent to the freshwater stream which drains into and feeds Lake Royer. Other isolated palustrine wetlands probably occur throughout the wooded portions of the installation downgradient of numerous unmapped springs.

3.3.8.4 Rare, Threatened, and Endangered Species

Identification of rare, threatened, and endangered species at Fort Ritchie was accomplished through both the wildlife and vascular plants surveys, described above. The results of these surveys indicated that no federally-listed endangered species were confirmed on the installation. However, four plant species that are federally-listed as Category 2 species of concern were confirmed on the installation, and one mammal that is State of Maryland-listed as a species of special concern was confirmed on the site. Additionally, it was determined that the forested stream areas of the installation constitute excellent potential habitat for one federally-listed candidate mammal species. There are no resident endangered species in the area, although bald eagles (*Haliaeetus leucocephalus*), listed as federally threatened, have been sighted in the area, although not directly on Fort Ritchie property.

3.3.8.5 Cultural Resources

A final report on the review of all pertinent historical documentation and field surveys for cultural and historical resources was submitted by Dames & Moore in August, 1995. An archeological resource

sensitivity model was developed for Fort Ritchie during this investigation to assist in predicting the locations of unrecorded archeological sites. The findings from this investigation along with the application of the sensitivity model indicated that there are two archeological sites at the southwest end of Lake Royer. These sites have been determined to be of no archaeological significance (Hofmann, 1996). It is not anticipated that additional sites will be found on the installation due to the high degree of disturbance that has occurred in the portions of the installation most likely to contain archeological sites.

A historic district has been designated at Fort Ritchie. This district was designed to account for all of the structures and sites associated with the development of Fort Ritchie from 1926 to 1945. Recommendations from cultural resources studies include application for inclusion of the Fort Ritchie Historic District in the National Historic Register.

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4.0 INVESTIGATION RESULTS

Areas requiring environmental evaluation at Fort Ritchie were identified based on a thorough review of existing documents, regulatory records, interviews, and visual inspections, and are summarized in this section. First, areas which have been addressed in reports prior to the EBS investigation are discussed. Next, areas within Fort Ritchie that have been identified as requiring environmental evaluations, but have not been addressed in previous reports are presented. The third sub-section describes adjacent properties that may be potential sources of contamination. The fourth sub-section outlines non-CERCLA environmental issues. Finally, remedial actions that have been taken by the installation are summarized in the fifth sub-section of Section 4.0.

The CERCLA environmental issues (issues regarding storage, release, or disposal of hazardous substances or petroleum products) discussed throughout Section 4.0 form the basis for dividing the Fort Ritchie property into CERFA parcels and for classifying the parcels into one of seven categories. Detailed information regarding CERFA parcel categorization of the Fort Ritchie property is presented in a CERFA Letter Report in Appendix J.

4.1 PREVIOUSLY IDENTIFIED SITES

The following areas have been identified in previous reports as requiring environmental evaluations and have undergone investigations and remedial actions.

4.1.1 Former Skeet Shooting Range

The former skeet shooting range is located on the southern end of Fort Ritchie, on the east side of Ritchie Road. Although all range structures were located on Fort Ritchie property, clay pigeons and lead shot crossed the property boundary. The range operated informally from the early 1970s until November, 1992, when the site was closed so that construction of a new Maryland National Guard Armory could begin. Construction of the new Armory was completed in 1995.

Sampling of the Armory construction site and adjacent property was conducted in 1992 (Spotts, Stevens and McCoy, Inc., 1992 and 1993), and the results identified the site as potentially contaminated by lead. More than 61 of the 85 samples, collected within a semicircular area with a radius of 450 feet, had concentrations of leachable lead as determined by the Toxicity Characteristic Leaching Procedure (TCLP) above the EPA regulatory level of 5.0 ppm, including many samples collected from adjacent properties. These contaminated properties are underdeveloped woodlands with dense undergrowth and at least one stream.

Soil excavated during the construction of the Armory was found to contain high levels of lead. In 1993, an Environmental Assessment of the Armory construction site was conducted (Hillmann Environmental, 1993). The Hillmann report recommended disposal of excavated soil as a hazardous waste.

Recently, a study was conducted by USACHPPM (1995) to determine the extent of off-property lead contamination. The study found total lead concentrations in surface soil above the levels considered safe for residential property use in all three areas sampled. Subsurface soil total lead concentrations also appeared to be above health-based standards for residential property use. TCLP lead results and subsurface lead data indicated that the lead on site is leaching and could potentially impact groundwater. This study did not determine the vertical and horizontal extent of lead contamination in the off-site area

of the former skeet shooting range. USACHPPM has recently proposed additional sampling in this area up to a radius of 950 feet (Hofmann, 1995).

4.1.2 Post Exchange Auto Service Station (Building 515)

Building 515 was constructed in 1973 and consists of a one-story metal frame structure with a brick exterior. It is the Post Exchange auto service station, gas station, and shoppette. There are three 10,000-gallon gasoline USTs, a 2,500-gallon heating oil tank, several gallons of ethylene glycol, and lead acid batteries which pose potential spill hazards. Oil change and battery recharging operations were conducted in the garage of the building until about 1992. The used oil drained into an underground waste oil tank which was removed in 1992 (Mummert, 1995). The floor is equipped with a floor drain that is connected to the sewer line through an oil/water separator. The garage is now used as a store for the shoppette. The 1992 ECAS found 13 used lead acid batteries and two gallons of battery acid in the garage where battery recharging was performed.

In August, 1984, an estimated 1,570 gallons of unleaded gasoline was released due to a leak at a 90 degree flexible pipe located at the base of the self service dispenser. An estimated 18-25 gallons of gasoline that reached the surface was cleaned up with absorbents. The leak was also repaired and tested on August 13, 1984, but no contaminated soil was removed at the time.

In 1991, USAEHA conducted a hydrologic study to determine the extent of soil and groundwater contamination at the service station. All sampling was conducted around the spill site. The study found concentrations of benzene to be above the MCL for drinking water in the shallow aquifer at two monitoring wells close to the release site. The study also recommended permanently sealing a nearby Water Supply Well 3 to preclude any fuel-related contaminants from migrating deeper into the aquifer along the annulus of the well. Soil contaminated with petroleum products was removed from the spots where USTs were located during UST replacement activities in 1992. No sampling of the deep aquifer was conducted at this time.

4.2 NEW AREAS IDENTIFIED BY THE ENVIRONMENTAL BASELINE SURVEY

Areas of the Fort Ritchie property that were identified to be potentially contaminated as a result of this EBS and have not been addressed in previous reports are presented in this section.

4.2.1 Golf Course Maintenance Shop (Building 5)

Building 5, the golf course maintenance building, was constructed in 1943 and used as a bowling alley. The building is a one story wood frame structure with partial basement. Half of the building is currently used as a thrift shop, and the other half is used to store golf maintenance equipment, fertilizers, paint cans, and motor oil. Prior to 1993, the building stored various pesticides, fungicides, insecticides, and herbicides. No spill containment was provided during this period, and mixing of chemicals was reported to have occurred in the driveway. Currently, pesticides, fungicides, herbicides, and fertilizers are stored in a HAZMAT shed in the golf shop area, and mixing activities still take place in the driveway. Flammable materials (paints, solvents, and thinners) in drums and aerosol cans are stored in a separate HAZMAT shed.

The No. 2 fuel oil UST at Building 5 was replaced in 1991 as part of the comprehensive Administration Area UST replacement program, two monitoring pipes were installed, and soil samples were collected. The concentration of TPH detected in a soil sample collected from the tank area was 100 mg/kg TPH. On January 14, 1992, No. 2 fuel entered the basement of the building through a leak in a

seal in the boiler supply line during refueling of the UST (No. R002). Instead of pumping oil into the fill line, the tank filler pumped the oil into the manhole. Eighty gallons were recovered from the UST manway, fifty gallons were recovered from the basement of Building 5, and twenty gallons were pumped by sump pump into Lake Royer.

4.2.2 Administration Area (Buildings 100s - 300s)

The Administration Area is located in the southeastern portion of the installation and houses the 100, 200 and 300 series buildings. As many as 47 USTs are located in this area. Forty of the USTs store No. 2 fuel oil and seven store diesel fuel. The capacity of the USTs range from 1,000 to 10,000 gallons. Most of these tanks were installed as replacements to older ones within the last five years. During replacement, 31 USTs in the area were found to have released petroleum products to the subsurface. The volume of soil excavated from the tank locations ranged up to 179 tons at one site. The removal of USTs, soil cleanup, and new tank installation were supervised by MDE's Oil Control Program. At UST removal locations, monitoring pipes were installed to a depth of two feet below excavation bottom only at locations where release of petroleum products occurred and where MDE required that the monitoring pipes be placed. At all UST replacement locations, monitoring pipes were installed to 2-feet below the new tank bottom. Thirty-eight monitoring pipes were found to be dry and could not be sampled, thirty-three monitoring pipes did not show the presence of petroleum products above detection limits, and three pipes had petroleum concentrations less than 2 mg/l.

4.2.3 Telecommunications Facility (Building 160)

Building 160 is the data processing and telecommunications facility. It is a two-story frame structure built in 1934. The building has an indoor firing range on the lower floor which makes the basement of the building suspect for lead dust contamination. The building has concrete floors, however, there is no penetration from the main floor to the pistol range in the basement. Therefore, potential for lead contamination on the main floor from bullets is little to none. For security reasons, the building could not be inspected during the August, 1995 site visit.

4.2.4 Photographic Laboratory (Building 301)

The Photographic Laboratory (Building 301), a two-story wood/concrete frame structure built in 1934, is the photographic laboratory and provides film, negative, and print processing services for Fort Ritchie activities and tenants. Two dark rooms and a photo studio are located on the upper floor of the building. Office space, an equipment room and a furnace room are located on the lower floor. An ion exchange system is used to recover silver from the exhausted fixer solution before discharge to the sanitary sewer. Photographic chemicals and exhausted fixer solution are stored in one gallon or larger containers inside the dark room.

Building 301 has been in its present location since 1958. The spent fixer solution was stored in containers on site and disposed of by DRMO from 1977 until 1982. The ion exchange system was put in place in 1982. Waste disposal practices prior to 1977 are not known.

Chemicals are stored in a HAZMAT shed near the building. Prior to the first usage of the shed about 8 years ago, all chemicals were stored in a shed that was attached to the outside of the building. During the August, 1995, site inspection, ICF KE personnel noticed oil stains in the concrete floor of the equipment room located on the lower level. An old paint box located outside the building was found to contain rusted household paint cans.

4.2.5 Dental Clinic (Building 332)

Building 332 is a two-story wood frame structure constructed in 1943. It was originally used as non-commissioned officer's (NCO) quarters and was converted to its current use in 1981 as a dental clinic. Prior to that, the Dental Clinic was located in building 330. Records also show that building 206 may have been used for storage by the Dental Clinic. Small quantities of developer and fixer solutions and other laboratory chemicals are stored on site. A silver recovery unit is used to recover dissolved silver from spent fixer solutions before they are discarded through sanitary drains. The silver recovery unit has been in place since 1981. This recovery unit is similar to the one in the photographic laboratory (Bldg 301). Other chemicals, including acetone, methanol, butanol, glycerine, chloroform, formaldehyde, and adhesives, are stored in a flammable storage cabinet. Biological wastes are also generated in the Dental Clinic.

4.2.6 Health Clinic (Building 341)

Building 341 is the health clinic for the installation. The building is a one-story steel frame structure with a brick exterior constructed in 1964. Chemicals stored on site include small quantities of photographic developer and fixer solutions, acetone, formaldehyde, acetic acid, aluminum sulfate, and glutaraldehyde. A HAZMAT shed used for temporary storage of hazardous waste, including biological wastes, is located near the building.

4.2.7 Wood Crafts Shops (Buildings 346 & 347)

Buildings 346 and 347 comprise the wood crafts skills development center. The buildings are two-story wood frame structures with an aluminum siding exterior constructed in 1943. Building 346 was originally a barracks building. It can be assumed that chemical storage began in 1979 when the Wood Craft Shop was moved in to Building 346. Building 347 was built in 1984 for the Arts and Crafts Shop, and chemical storage may have taken place since then. Small quantities of paint, thinner, stains, sealers, and polyurethane are stored here. Flammable chemicals are kept in appropriate storage cabinets.

4.2.8 NCO Family Housing Area (Buildings 400s)

The NCO Family Housing Area is located in the southwest central portion of the installation. A total of 125, mostly 550-gallon, USTs were located in the area until they were removed between 1991 and 1993. During removal operations, twenty-four USTs located in the northern corner of the NCO Family Housing Area were found to have released petroleum products to the subsurface. Contaminated soil was removed under the supervision of the MDE Oil Control Program from the UST locations where release occurred. At UST removal locations, monitoring pipes were installed to a depth of two feet below excavation bottom only at locations where release of petroleum products occurred and where MDE required that the pipes be placed. At all UST replacement locations, monitoring pipes were installed to two feet below the new UST bottom. Twelve monitoring pipes were installed of which four were found to be dry and could not be sampled and eight did not show the presence of petroleum products above detection limits.

Piles of dark-toned material within a cleared, scarred area were observed in a 1952 aerial photograph. Subsequent aerial photographs taken after 1952 show this area to be the location of the 400 area housing units with the dark-toned materials no longer present.

4.2.9 Auto Craft Shop/Pesticide Storage Area (Building 401)

Building 401, constructed in 1934, is a two-story concrete frame structure with a stone siding exterior and concrete floor. The upper level is the auto skills center where vehicles are serviced and maintained. The shop is equipped with a floor drain which is connected to an oil/water separator. There is an old hydraulic car lift in the front northeastern corner of the building. This is also a staging area for solid waste handling. In the 1992 ECAS, oil seepage or spillage was observed from a small oil collection container in this area. During the site visit by ICF KE staff in August, 1995, oil stains were also noticed in the area. Any release of hazardous substances from this area will flow towards the street and into the lakes, although infiltration into cracks in the pavement outside would also be possible.

The lower level of the building consists of a boiler room, an air compressor, and a storage area. The chemical storage area has a sink, equipped with a hood for fume control, where chemical mixing occurs. The sink is connected to the sewage system. There are no floor drains. Various pesticides and herbicides have been stored in the lower level of Building 401 since 1952 (Mummert, 1995). Many of these chemicals are received in 5-gallon containers or greater, and in 25-pound bags. There are also small quantities of various other chemicals as well as an XRF meter with a radioactive source (used for lead testing) that was received on May 16, 1994. Pesticides stored here in the past include chlordane, diazanon, malathion, and DDT. Prior to May, 1993, the pesticide storage building was not equipped with a 4-inch berm to contain spills in the pesticide storage area. Other substances that have been stored in the lower level include small quantities of waste oil (55-gallon AST), waste antifreeze (275-gallon AST), and petroleum naphtha solvent (14 gallons).

4.2.10 Department of Public Works Maintenance Facility (Buildings 601-603)

Buildings 601, 602 and 603 were constructed in 1953 and are currently used by the Department of Public Works (DPW) Maintenance Department. Building 601 is the veterinarian facility but it is also utilized for general administration and general purpose storage of materials handling equipment. It is also the storage warehouse for ColeJon, the base maintenance contractor. Paint storage and brush cleaning takes place in the northern corner of Building 601 near the carpenter's shop. Various chemicals stored in the building which present spill hazards include paints, fuel additives, algicide, antifreeze, sodium bisulfite, and lubricating oil. There are no dikes, curbing, or other spill control measures to protect against spills in the building warehouse.

Building 602 is used for general purpose storage and administration and is the location of the water well pump station. It also serves as ColeJon's storage facility. The east side of Building 602 is used for storage of paints and batteries. Chemicals and petroleum products are stored in drums and small containers in a covered area between Buildings 601 and 602. This 375 square feet area is asphalt paved and is surrounded by a 6-inch spill containment curb. It is believed to have always been paved (Mummert, 1995). Before 1952, it was an open shed where pesticides including DDT and Chlordane were stored (Mummert, 1995; Olsen, 1995). About 8-10 gallons of fuel oil once was spilled within the containment area and was cleaned up immediately (Gilbert, 1995). Building 603 serves as general purpose storage and general administration. The Automated Data Processing Center (ADP) moved here from building 602 in fall of 1995.

4.2.11 Old Service Station (Building 605)

Building 605, a two-story combination wood frame and masonry structure constructed in 1952, is a DPW facility. The building operated as a gas station prior to WWII and was converted to an office around 1950 (Olsen, 1995). During excavation of water lines for a new bathroom in the area, an oil sheen was observed on the water surface of the wet excavation hole (Gilbert, 1995). The oil sheen is attributed

to spillage from an old AST that used to be in the area because of the likelihood that its residue would produce a sheen at that location, rather than to the two abandoned USTs which are located underneath Building 605.

4.2.12 Motor Pool (Building 700)

Building 700, a stone structure built in 1952, is the motor pool maintenance shop and refueling station. Currently, it is used as an office and warehouse for the dispatch office of the transportation department as well as for washing fleet vehicles. Until the late 1980s, maintenance of the vehicles in the motor pool occurred inside Building 700; however, vehicles are no longer maintained on site. The former paint room has air filters that remain in place because of high removal cost. Two HAZMAT sheds are located in the northern side of the building for temporary storage of chemicals and hazardous wastes. The vehicle parking area is at the southern side of the building.

When the maintenance shop was in operation, oil changes, vehicle repairs, and motor parts cleaning occurred frequently. Waste oil was collected in 55-gallon drums and stored inside the shop prior to being hauled off site. At the western side of the former maintenance shop, there were oil stains, accumulated oil in concrete cracks, and standing oil near a compressor line. A 55-gallon lube-oil drum and an area used for short-term storage of radioactive materials destined for turn-in were also observed during the EBS inspection. The air compressor room also had oil stains on the concrete floor; this room has no floor drains. There is no containment system for spills that may occur in the refueling area or in the building.

Waste storage and/or disposal occurred around the northern and western sides of the building. Old batteries were stored in the western part of the building. Some used tires and other waste materials were still present at the time of the site visit by ICF KE staff in August, 1995.

There have been two recent petroleum release incidents at the motor pool. In April, 1995, a delivery truck, erroneously clamped to the vapor recovery line, released about 11 gallons of diesel oil onto the asphalt parking lot. The release was reportedly contained within 10 minutes. In June, 1994, about 1.5 gallons of diesel oil leaked over a period of time from a vehicle in the parking lot. Some of the oil may have migrated to the storm drain before the spill was cleaned up. An oil/water separator installed in the early to mid 1980s receives discharges from all the drains from the vehicle bay and the parking lot area.

4.2.13 DPW Maintenance Equipment Area (Bldgs 731-736)

The DPW Maintenance Equipment Area houses Buildings 731-736. Building 731 is used to wash general purpose vehicles, Building 734 is used by the DPW to service and maintain vehicles and equipment, Building 735 is used as an office, and the other buildings are used mostly for equipment storage. This area has always been the equipment yard for DPW. Many visible oil stains were observed in the area during the August, 1995, site visit, especially around Building 734.

Building 734, the DPW maintenance building, was constructed in 1974. The concrete floor in the shop area has no drain and is not curbed. A 500-gallon UST, adjacent to the building is used to store waste oil. The UST had no overspill control prior to 1992 (ECAS Report). Two HAZMAT sheds located north of Building 734 are used to store materials that include antifreeze in 55-gallon drums, pesticides, and herbicides. An additional 500-gallon AST diesel tank with spill tray is located in close proximity to Building 734 on the northeast side. Surface runoff from the area where the AST is located flows into a concrete culvert immediately behind Building 734 and leads directly into the installation storm water drainage system which ultimately empties into Lake Royer. According to former employees (Mummert, 1995; Olsen, 1995), the entire east side of the DPW Maintenance Equipment Area was originally used for

drum storage while the west side was used for equipment storage, including pesticide application equipment.

Building 731 is located in the southern portion of the DPW Maintenance Equipment Area. Drains in the concrete floor are connected to an oil/water separator installed in 1992. The oil/water separator is checked quarterly and any oil accumulation is pumped out. Wastewater from the oil/water separator is discharged to the sewer system. Prior to 1992, discharge from an older oil/water separator went directly into Lake Wastler under a Maryland NPDES permit. Also, water running out of the front of the wash area flowed down the hill into the lakes prior to 1992 when a berm was constructed in front of the wash area.

4.2.14 Former World War II Hospital Area

This area was identified from aerial photographs and facility maps as the location of the WWII hospital. All the former WWII hospital buildings have been demolished except Building 811, a wing of the former hospital that is now used as officer's quarters. The latest building demolition occurred in 1992 when the following four buildings were demolished: Building 828, a former hospital mess dining facility that was later converted to a storage facility; Building 829, a former recreational billet facility that was later converted to a thrift shop; Building 831, a recreational facility that was later converted to a museum; and Building 833, a former morgue that was later converted to a warehouse. Also, according to a retired employee, Building 833 was the former location of herbicide storage for the golf course (Mummert, 1995).

Building 837, a general purpose warehouse and central receiving station for the installation built in 1975, is located on the grounds of the former WWII hospital. It is constructed with concrete blocks and has a concrete floor. It houses various small quantities of hazardous materials.

4.2.15 The 900 Storage Area

The 900 Storage Area houses two former incinerators (Buildings 907 and 908) and a storage facility (Building 909). Building 909 and the land around the buildings in this area have been used continuously as a temporary storage yard for equipment and miscellaneous items before taking them off site. Transformers, above ground storage tanks, batteries stored on trays, paint cans, and other miscellaneous items are stored in this area. According to former employees, PCB-containing transformers and other chemicals may also have been stored in this area in the 1980s (Mummert, 1995). An active above ground tank used for storing gasoline for use by the grounds maintenance staff is also located in the area.

During the 1992 ECAS, about 30 lead acid batteries were found stored on a wooden pallet on the ground/blacktop. There was no acid resistant storage/containment system. It was reported that the batteries had been stored in cold weather, cracked, and spilled their contents. The internal 1994 ECAS response to the 1992 findings confirmed that the batteries were moved to the basement of Building 908 and stored on a spill containment pallet by on site employees.

Building 907 is an old incinerator constructed of stone and estimated to have been built in the early 1930s. The incinerator operated into the 1940s and probably burned a wide variety of different waste materials generated at Fort Ritchie. Typical solid wastes, including small quantities of miscellaneous chemicals, were dumped directly into the incinerator and burned. Residual ash was observed at the base of the incinerator during the August, 1995, site visit. The ash could contain hazardous substances.

The newer incinerator in Building 908 was constructed in 1952 and operated until 1975. Wastes generated at Fort Ritchie were also hauled to the new incinerator which, unlike the old incinerator, was equipped with an oil pre-burner. During operation, approximately 2,000 gallons of No. 2 fuel oil stored in above ground tanks were used monthly. Batteries and lead-based paints were reportedly stored inside the incinerator building, directly on the floor near the front of the building after it was abandoned (Gilbert, 1995). Some of the batteries were still present at the time of the August, 1995, site visit, though there was no sign of release. In addition, storage of PCB containing items, petroleum products, and batteries may have occurred near the rear of the building.

4.2.16 Lake Wastler and Lake Royer

Lake Wastler (the Upper Lake) and Lake Royer (the Lower Lake) are located in the northeastern section of the Fort Ritchie property. Lake Royer was constructed in the late 1800s as a recreational facility. Lake Wastler was added somewhere before 1926. All stormwater from the Fort Ritchie property drains into these two lakes. Over the years, there were numerous observations of oil sheens, spills of paint and other substances floating on the lakes, and an occasional fish kill attributed to overheating (Mummert, 1995). Apparently, these incidents occasionally occurred when residents in the housing area accidentally released products they were using for household or automotive projects. Since the mid 1980s, housing occupants have been required to perform all vehicle washing at the auto wash rack. In 1993, Lake Wastler was dredged to remove five feet of bottom sediments. Lake Royer was dredged in 1981 and four feet of bottom sediments was removed. Sediments dredged from the two lakes were disposed off post (Hofmann, 1995). During the site visit in August, 1995, the dam at Lake Royer was undergoing repairs and the lake was dry.

4.2.17 Wise Road Waste Disposal Area

There is a suspected former waste disposal site along the southern boundary of the property at the northeastern corner of Ritchie Road and Wise Road. Ash from the incinerators in the 900 Area, household waste, and miscellaneous debris are believed to have been disposed in this area (Mummert, 1995). Aerial photos taken between 1952 and 1984 reveal bare ground scars and disturbed vegetation, an indication that waste dumping activity may have occurred here.

4.2.18 Ritchie Road Waste Disposal Area

A former waste disposal site is suspected to exist along the southern boundary of the property near the Skeet Range off Ritchie Road. Ash from the incinerators in the 900 Area, household waste, and miscellaneous debris are believed to have been disposed in this area (Olsen, 1995). Aerial photos taken between 1952 and 1984 reveal bare ground scars and disturbed vegetation, an indication that waste dumping activity may have occurred here.

4.2.19 Reservoir Road Waste Disposal Area

Periodic dumping of miscellaneous waste materials reportedly occurred along Reservoir Road (also known as Range Road) starting from the existing easement area outside the first fence gate and continuing towards the one million gallon post reservoir. Historically, the type of waste materials which have been observed include tires, construction debris, paint cans, and/or petroleum products. According to a former employee, USTs that were removed from the installation were stored temporarily along Reservoir Road, until contractors pumped out sludge residue and hauled them off site (Gilbert, 1995). Contaminated soils excavated during UST removals were also taken to Reservoir Road, placed on plastic sheets, and allowed to aerate for 3-6 weeks (Gilbert, 1995). During the 1995 site visit, stressed vegetation

was observed along this road. Aerial photos taken between 1952 and 1984 reveal bare ground scars and disturbed vegetation, an indication that waste dumping activity may have occurred here.

4.2.20 Wetland Area

The Wetland Area occupies the southwestern corner of the Fort Ritchie property. Household appliances and concrete slabs have been spotted in this area in the past (Mummert, 1995). In addition, contaminants from the skeet range and the dump sites along Reservoir and Ritchie Roads could have migrated through the subsurface or via surface water runoff to this area over the years.

4.2.21 Unexploded Ordnance Impact Area

This impact area was the site of WWII outdoor readiness training. Firing was directed from the southwest corner of the tower located on the parade ground into the side of Quirauk Mountain, occasionally setting the mountainside ablaze by using phosphorous-coated bullets. The extent of the impact area is unknown as very little historical information is available. In 1992, three to five UXOs were encountered within one foot below grade during excavation and construction of the Post Exchange and the new Commissary buildings (Buildings 517 and 518) (Gilbert, 1995).

4.2.22 Abandoned Firing Ranges

Information obtained from a 1934 site map reveal several abandoned firing ranges located in the general area of the new PX and bowling center. The 1000-yd, 600-yd, 500-yd, and 300-yd firing range originated from the auto exchange service center area (Bldg 515) and shot southwest towards Reservoir Road. To the northeast of these ranges, there was also a 200-yd pit ranging from Bldgs 501-505 into the playground area. A separate 1,000-in machine gun range was located on the west bank of Lake Royer and a 75-yd pistol range was located in the area where housing units 722-724 are currently located. The location of a 1000-in rifle range shown on maps drawn in 1990 corresponds to the receiving end of the 1000-yd firing range. It is not certain if indeed a 1000-in rifle range once existed at this location.

4.3 ADJACENT OR SURROUNDING PROPERTY SOURCES

A search of federal and state databases to identify off-site contamination sources within a one-mile radius of the Fort Ritchie installation indicated the following:

- No National Priority List or CERCLIS sites;
- No RCRA treatment, storage, or disposal facilities;
- No reported emergency response notification system spills reported; and
- Three UST locations and two small quantity generators.

Properties adjacent to Fort Ritchie whose activities involve the use, storage, and generation of hazardous substances and/or petroleum products are discussed in the remainder of this sub-section. In general, these properties pose no significant environmental risk to the Fort Ritchie property.

4.3.1 Underground Storage Tank Locations

Two existing UST locations were identified along State Route 550 (Military Road): GT's Handi Market, located approximately 0.3 miles from the site, has one 6,000-gallon and two 4,000-gallon gasoline tanks and one 4,000-gallon kerosene tank, all of which were installed nine years ago; and Jan-Ann Enterprises, Inc., located approximately one mile from the site, has a heating oil UST of unknown capacity. Also, according to former employees, a gas station formerly existed on State Route 550, across the road from GT's Handi Market (Mummert, 1995). There is no record of release of petroleum products from these UST locations.

4.3.2 Small Quantity Generators

Two RCRIS small quantity generators are regulated by EPA within one mile of the Fort Ritchie property: the Maryland Army National Guard (EPA identification number MD0000370262) located approximately 0.9 miles northeast of the site; and Cascade Elementary School (EPA identification number MD0000794867) located approximately 0.2 miles north-northeast of the site. A database search of federal and state records did not indicate any environmental impact on the installation resulting from these two facilities.

4.3.3 Wastewater Treatment Plant

The Wastewater Treatment Plant (WWTP) is located just outside the northeastern corner of the Fort Ritchie property. The wastewater treatment plant was originally constructed in 1939. Additions were made in 1952; between 1981 and 1983, the plant was completely rebuilt. The WWTP was owned and operated by Fort Ritchie until it was transferred to the Washington County Sanitation District in 1993.

The WWTP provides primary and secondary treatment of all sanitary sewage from Fort Ritchie. The average daily usage of the WWTP is approximately 250,000 gpd, and its design capacity is 1,000,000 gpd. The effluent from the plant is monitored in accordance with MDE regulations. Sludge from the WWTP is not classified as a hazardous waste by MDE and is currently permitted for disposal at the Washington County Sanitary Landfill.

According to former employees (Mummert, 1995; Olsen, 1995), wet sludge from the WWTP was historically loaded into tank trucks that hauled the waste off site for use on nearby farmlands. During the winter, when wet sludge could not be applied to farmland, it was allowed to dry in existing drying beds and hauled to an off-site landfill. Some sludge from the WWTP is believed to have been applied to the parade field once when it was regraded during WWII (Olsen, 1995). Based on the current classification of the sludge as a nonhazardous waste by MDE, the application of the sludge to the parade field should not have had any environmental impact on the parade field or any portion of the Fort Ritchie property.

4.3.4 Dry Cleaning Service

According to Washington County records and a former employee (Mummert, 1995), a dry cleaning operation was located across from the main gate in the early 1970s, at the corner where State Route 550 makes a 90 degree turn toward the northwest. Currently, trailers are parked in this area. Based on practices at this type of operation, it is possible that dry cleaning solvents could have been released into groundwater. Water wells 5, 6, 7, and 8, which are part of the water supply system for Fort Ritchie, are located downgradient of the former dry cleaning facility. However, because the water supply wells are 187 to 402 feet deep, the presence of solvents from the dry cleaning operation is unlikely to be detected in water extracted from these wells. This hypothesis is supported by well sampling and analysis records.

4.3.5 Skeet Range Impact Area

As previously noted, the impact area of the former skeet range extends beyond the Fort Ritchie property. Recently, a study was conducted by USACHPPM (1995) to determine the extent of off-property lead contamination. As discussed in sub-Section 4.1.1, the study found total lead concentrations in surface soil above the levels considered safe for residential property use in all three areas sampled. The vertical and horizontal extent of lead contamination in the soil of the former skeet shooting range area is still unknown, and additional studies are planned (Hofmann, 1995).

4.4 NON-CERCLA RELATED ENVIRONMENTAL HAZARD AND SAFETY ISSUES

Information on non-CERCLA environmental hazard and safety issues presented in this section includes asbestos, lead-based paint, PCBs, radon, UXOs, and radionuclides. These issues are identified as present or not present and are used as qualifiers, but they do not determine CERFA parcel categorization, which is based on storage, release, or disposal of hazardous substances and/or petroleum products.

4.4.1 Asbestos

As described in Section 2.1.9, an asbestos survey of every building was conducted in 1991/1992 by Dewberry & Davis to identify the presence of ACMs and to recommend appropriate abatement actions. An asbestos removal policy was developed for the installation on March 24, 1992, based on the findings of the survey which describes procedure and necessity for removal of asbestos as well as suggestions for proper management of ACMs.

Table F-1 in Appendix F lists each building on the installation with its construction date, the date of the survey test, its ACM status, and remarks identifying exactly where asbestos was found and assumed to be. The survey found that all buildings at Fort Ritchie are assumed to contain asbestos except for the following buildings built after 1980:

<u>Building No.</u>	<u>Facility Description</u>	<u>Year of Construction</u>
152	Scientific operations building	1988
347	Skills development center	1984
506	Childhood development center	1982
509	Bowling center	1983
510	Childhood development center	1991
521	Youth activity center	1983
606	Administration	1986
607	Administration	1990

After the asbestos survey was conducted, the following new asbestos-free buildings were constructed at the installation:

<u>Building No.</u>	<u>Facility Description</u>	<u>Year of Construction</u>
517	Main store	1992
518	Commissary	1994
519	Fire station	1994
839	Storage	1993
1013	Water well & pump building	1992
1025	ARNG/USAR center.	1993

Remedial actions have been implemented in conjunction with building demolitions and in several other instances to mitigate exposure to asbestos at the installation. In general, asbestos mitigation occurred when potential for disturbance, damage or deterioration that would create exposure to humans existed. Asbestos from Building 132 and Building 133 was removed in early 1992, by Powell Construction. ACMs were properly removed and disposed of in conjunction with the demolition of seven WWII era buildings (Buildings 125, 127, 128, 351, 829, 831, and 833) in early 1993. There are no plans at this time to remove ACMs from other buildings because the ACMs are not considered friable.

4.4.2 Lead-Based Paint

Testing for LBP has been conducted on various buildings over the years in three main testing efforts. Buildings which were earmarked for renovation or demolition were specifically tested in order to determine appropriate disposal practices for building materials.

4.4.2.1 Test of Housing Units

Testing on 25 multi-family housing units and five officer's position quarters was conducted by Dewberry & Davis in October and November, 1991. Based upon this limited review of testing data, it is apparent that environmental hazards exist due to LBP, as defined by MDE regulations and the Department of the Army Technical Note No. 420-70-2. On-site XRF results were supplemented with Atomic Absorption Spectroscopy/Spectrometry (AAS) lab analyses. Positive results were identified as XRF readings greater than 1.2 mg/cm² and AAS readings greater than 0.5%, 5000 ppm, or 1.0 mg/cm².

Position quarters tested in 1991 were Buildings 4, 155, 710, 811, and 860. Concentrations of lead exceeding the positive levels defined above were identified in various components of the interior and exterior of these buildings. The findings in each building are presented in the lead summary Table F-2 in Appendix F. It was recommended that the position quarters be evaluated more thoroughly in order to abate only those building components on which the LBP concentration exceeds XRF 1.2 mg/cm² or AAS 0.5% readings.

The housing units tested in 1991 were 452-3, 457-4, 458-3, 458-6, 459-3, 462-3, 462-4, 464-3, 476-1, 480-1, 480-2, 480-3, 481-1, 482-2, 484-3, 486-1, 721-2, 723-2, 730-1, 748-2, 753-2, 755-5, 761-1, 779-1, and 785-2. These results were assumed to be representative of all housing units including those not tested because of the homogeneous nature of housing construction and design. Certain individual components were tested and found to contain concentrations of LBP in excess of the screening levels. A total of 336 multi-family and 5 single-family housing units are expected contain components with concentrations in excess of screening levels. The components in these houses that may contain LBP include baseboards; interior doors; exterior painted porch columns; pipes and conduits; front/rear/side door jambs, frames and trim; exposed lintels; window sashes, trim, and wells; and storage shed doors. Some playground equipment and "attached" shed doors were also tested and reported in the 1991 report. Paint on playground equipment behind Buildings 462 and 751 were all found to have no LBP, and attached shed doors on building units 461-2 and 464-1 tested positive for LBP with XRF readings of 2.9 mg/cm². All the sheds doors have since been replaced.

4.4.2.2 Test of Administration Buildings

Twenty-two administration buildings of varied use were tested and the results presented in a November 9, 1994, report by Powell Construction. Buildings tested were 11, 113, 123, 130, 131, 132, 133, 134, 140, 141, 149, 150, 160, 202, 205, 323, 324, 325, 326, 331, 336, and 337. Positive results were indicated by XRF readings greater than 1.3 mg/cm² and AAS readings greater than 100 mg/kg or 0.01%

lead by weight. A detailed account of the results including lead content in the soil around the buildings is presented in Table F-2, Appendix F.

4.4.2.3 Test of Child Care Housing Units

On May 17, 1995, an additional XRF LBP testing effort was conducted in family housing units that were used as child care facilities. Two hundred analysis reports resulted from this test, and a recommendation management plan was proposed.

4.4.3 PCBs

Transformers are the only equipment at Fort Ritchie which were found to contain PCBs. Of the 242 transformers on the installation, only nine have been found to contain PCBs. The PCB-containing transformers have been removed and disposed appropriately in accordance with environmental regulations. Other equipment tested for the presence of PCBs include capacitors, hydraulic equipment in the auto shop, and heat transfer systems. No PCBs were found in any of these items. Table F-3 in Appendix F identifies the pole location and building location of each transformer on base, its PCB status, and remarks on its testing status and results.

On February 9, 1989, a site inspection was conducted to document PCB-containing items in use and storage. The survey identified 246 transformers on base, of which 219 were in service and 27 were in storage. Those transformers with nameplates were examined to see whether the presence of PCBs was indicated on the labels. Six nameplate transformers in use were identified this way as containing PCBs. Three of the transformers were vault transformers located at Buildings 400, 402, and 403, and three were pole transformers located on pole 130B near Building 520. One Westinghouse transformer in storage at the old loading dock area beside Building 909 was also identified as containing PCBs. The six transformers in use were removed, appropriately disposed of, and replaced with PCB-free transformers in 1989. The PCB transformer in storage has also been removed.

The remaining transformers without nameplates were subsequently tested. To date, all the transformers on base have been tested. Two transformers at Buildings 161 and 451 were found to contain PCBs and were disposed of according to TSCA requirements. Results of the final testing effort covering 67 transformers (approximately 30%) found three positive PCB transformers at Building 119, Pole 253. All other transformers were found to be PCB-free. Remediation on the three PCB transformers is pending.

4.4.4 Radon

Testing for the presence of radon at Fort Ritchie was conducted in the fall of 1989, and the results indicated that radon is not present at levels of concern on site. All buildings registered readings of less than the EPA threshold value of 4 picoCuries (pCis). A question was raised as to whether there was any background radiation from the natural rocky and mountainous geology. However, according to the test results and available information, the hazard of radon is not a concern for any of the buildings on the Fort Ritchie property.

4.4.5 Unexploded Ordnance

In the 1940s during WWII while the installation was used as a War Department MITC, weapons practice introduced the possibility of UXO scattered on site. Firing originated from building 504 and was directed into the side of Quirauk Mountain, occasionally setting the mountainside ablaze by using phosphorous-coated bullets. Any UXO would most likely be anti-tank shells, possibly of foreign

manufacture. A zone has been designated as the "impact area;" however, according to current employees, due to the randomness of trajectories, there is potential for UXO to be present anywhere on site in the general direction of Quirauk Mountain, including the housing areas. An interview with a former employee revealed that the contractor for building the new Post Exchange (Building 517) in 1992 encountered about 3-5 UXO shells during construction and demolition activities (Gilbert, 1995). The UXOs were 8-inch long 75mm shells buried about 1 foot beneath the top soil.

4.4.6 Radionuclides

An industrial radiation survey was conducted from June 25 to 29, 1990, as part of the environmental program review by the Nuclear Medical Science Officer of the Health Physics Division. A Department of the Army Radiation Authorization is required for the possession of any radioactive materials on site. Transport, use or storage of radioactive material on an Army installation by non-Army organizations also requires a Department of Army Radiation Permit (DARP). Equipment identified to contain radioactive materials, their location, and license numbers are listed in Table F-4, Appendix F. The report concluded that no health hazards are resulting from the use of ionization radiation sources at Fort Ritchie.

4.5 REMEDIATION EFFORTS

Remediation efforts at the Fort Ritchie property have been conducted at the former Skeet Range, the Post Exchange Auto Service Station, and at UST locations where release of petroleum products have occurred. There have also been scattered remediation activities regarding asbestos, LBP, and PCBs. Although these have been previously discussed in this report, a brief summary is provided in this section.

4.5.1 Former Skeet Shooting Range

Remedial action occurred at a section of the former skeet shooting range prior to the construction of the new Maryland National Guard Armory. Sampling of the Armory construction site and adjacent property was done in 1992 (Spotts, Stevens and McCoy, Inc., 1992 and 1993) up to a radius of 450 feet from the skeet range. Soil excavated during the construction of the Armory was found to contain high levels of lead. The excavated soil was disposed as a hazardous waste (Hillmann Environmental, 1993). Investigation of the impact area which extends beyond the Fort Ritchie property is ongoing. Recently, a study was conducted by USACHPPM (1995) to determine the extent of off-property lead contamination. The study found surface and subsurface soil total lead concentrations above the levels considered safe for residential property use. USACHPPM recently proposed additional sampling in this area up to a radius of 950 feet before a final remedial action is undertaken (Hofmann, 1995).

4.5.2 Post Exchange Auto Service Station (Building 515)

In August, 1984, an estimated 1,570 gallons of unleaded gasoline were released because of a leak at a 90-degree flexible pipe located at the base of the self service dispenser. An estimated 18-25 gallons of gasoline that reached the surface was cleaned up with absorbents. The remainder of the gasoline was not recovered. The leak was also repaired and tested on August 13, 1984, but no contaminated soil was removed at the time.

In 1991, USAEHA conducted a hydrologic study to determine the extent of soil and groundwater contamination at the service station. The study found concentrations of benzene to be above the MCL for drinking water in the shallow aquifer at two monitoring wells close to the release site. The study also recommended permanently sealing nearby Water Supply Well 3 to preclude any fuel-related contaminants

from migrating deeper into the aquifer along the annulus of the well. Soil contaminated with petroleum products was removed from the spots where USTs were located during UST replacement activities in 1992.

4.5.3 Underground Storage Tanks

USTs have been replaced, removed, and/or abandoned throughout the history of the site. Tanks were replaced at a rate of approximately ten tanks per year before basewide removals were started in 1991. Average excavation was about 5-8 feet deep and 4 feet wide. If contamination was found in an excavation based on odor, observation, or PID reading, stained soils were removed and, in many cases, monitoring pipes were installed.

About 12% of all regulated, unregulated, and position quarters housing area tanks required remedial actions. Leaks may have occurred at two-thirds of all administration area USTs and required remediation. Other areas where remediation occurred include the Golf Course Maintenance Building 5, the Service Station Building 515, and Motor Pool in the 700 maintenance area. All remedial actions were supervised and approved by MDE. As of October, 1995, all existing USTs at Fort Ritchie were reportedly in compliance with state requirements and were registered with the MDE. Table D-1 in Appendix D includes information on the specific remediation and/or mitigation efforts at the UST locations where release of petroleum products occurred.

4.5.4 Non-CERCLA Issues

The Fort Ritchie installation has implemented various remedial actions to ensure compliance with state and federal environmental regulations regarding ACMs, LBP, and PCBs. Remedial actions have been implemented in conjunction with building demolitions and in several other instances to mitigate exposure to asbestos at the installation. In general, asbestos mitigation occurred when potential for disturbance, damage or deterioration that would create exposure to humans existed. Remedial alternatives included removal, enclosure, or encapsulation. The majority of the buildings at the installation have LBP according to the installation-wide LBP survey. LBP removal and abatement for 11 buildings was done at the installation in July, 1995. LBP abatement for other buildings is likely to be implemented in the future. An installation-wide survey of PCB containing transformers has been conducted and removal of the three remaining PCB-containing transformers is pending. Details of remediation efforts regarding Non-CERCLA issues are presented in Tables F-1, F-2, F-3, and F-4 in Appendix F.

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Table B-1
Summary of Hazardous Substances Use and Storage Locations
Fort Ritchie Army Garrison

Location ^a	Organization	Hazardous Substances ^b	Source App A
5	Golf Course Maintenance Bldg	Various fungicides, herbicides, and pesticides	41,68
138	ISEC-CONUS, Micrographics	Film developer Dry silver paper	41,68
139	ISEC-CONUS, Logistics	Anhydrous ammonia	41,68
141	Electrical Maintenance Shop	Solvents	50
160	Data Processing and Telecommunications Facility	Acetic acid Developer	41,68
202	Main Library	Butyl acetate Methyl ethyl ketone	41,68
301	Photographic Laboratory	Xylene Methyl chloroform Toluene Butyric acid Alkaline chromates and dichromates	41,68
323	Photo Shop	Potassium sulfite Ammonium thiosulfate Ethylene glycol Epoxy resin Trichlorotrifluoroethane	41,68
332	Dental Clinic	Ferric chloride Chloroform Isopropyl alcohol	41,68
337	Education Center	Sodium hypochlorite Acetone Isoparaffinic hydrocarbon mixture	41,68

^a Building locations have not been specified for regulated substances such as toner cartridges, penetrating oil, nonrechargeable batteries, silicone oil, and various inks, and pigments that are used and stored in more than one location.

^b Predominant hazardous materials stored at this site have been identified by chemical names, product brand names, or generic descriptions of brand name products as they appear in the hazardous materials inventories. Additional potentially hazardous chemicals may be stored or used at these locations.

Table B-1. (continued)
Summary of Hazardous Substances Use and Storage Locations
Fort Ritchie Army Garrison

Location ^a	Organization	Hazardous Substances ^b		Source App A
341	Health Clinic	Acetic acid Acetone Formaldehyde	Hydrogen peroxide Aluminum sulfate Isopropyl alcohol	41,68
346	Skills Development Center, Woodcraft shop	Linseed oil Paint	Mineral spirits Denatured alcohol	41,68
347	Skills Development Center	Acetic acid Denatured alcohol Petroleum distillate Acetone	Hydroquinone Nitric acid Acetylene Ammonium hydroxide Toluene Lead/tin solder	41,68
401	Auto Craft Shop, HazMat Storage Area	Acetylene Waste antifreeze	Petroleum solvents Various herbicides and pesticides Waste oil	41,68
402	Commanding Officer's HQ	Magnesium-carbon batteries	Chlorine bleach Industrial cleaners	41,68
506	Child Development Center	Butyl diglycol	Metal polish Industrial cleaners	41,68
508	Commissary	Ammonium hydroxide Ethylene glycol	Styrene acrylic polymers Isobutane	41,68
509	Bowling Center	2-ethoxy ethanol Isopropyl alcohol	Ethylene glycol Aliphatic hydrocarbon	41,68
515	Exchange Service Station	Window and glass cleaners Automatic transmission fluid	Antifreeze Lead-acid batteries Polyglycol ether blend Bleach	41,68

^a Building locations have not been specified for regulated substances such as toner cartridges, penetrating oil, nonrechargeable batteries, silicone oil, and various inks, and pigments that are used and stored in more than one location.

^b Predominant hazardous materials stored at this site have been identified by chemical names, product brand names, or generic descriptions of brand name products as they appear in the hazardous materials inventories. Additional potentially hazardous chemicals may be stored or used at these locations.

Table B-1. (continued)
Summary of Hazardous Substances Use and Storage Locations
Fort Ritchie Army Garrison

Location ^a	Organization	Hazardous Substances ^b		Source App A
517	Post Exchange (PX)	Petroleum distillate Various pesticides and herbicides	Ammonium chloride Various cleaners	41,68
601	Warehouse	Fuel additives Sodium bisulfite Detergents	Paint Lubricating oil Alcide Ethylene glycol	41,68
602	Storage area	Paint	Paint thinner	41,68
603	DEH General Admin	Lead oxides (batteries)	Ammonium hydroxide Isopropyl alcohol	41,68
734	DEH Maintenance Area	Waste oil Various pesticides and herbicides	Antifreeze	41,68
817	General Purpose Storage Warehouse	Tin solder Antifreeze	Rosen core solder Denatured alcohol Solvents Insecticide	41,68
834	Outdoor Recreation Center	Chlorine gas Benzene	Naphthenes Paraffins Isobutane Oxidant/combustible (unknown)	41,68
900 Area	Incinerators and DEH Storage	Oil-filled transformers		41,68

^a Building locations have not been specified for regulated substances such as toner cartridges, penetrating oil, nonrechargeable batteries, silicone oil, and various inks, and pigments that are used and stored in more than one location.

^b Predominant hazardous materials stored at this site have been identified by chemical names, product brand names, or generic descriptions of brand name products as they appear in the hazardous materials inventories. Additional potentially hazardous chemicals may be stored or used at these locations.

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Table B-2.
Summary of Hazardous Wastes Generated and Shipped
Fort Ritchie Army Garrison
(1992-1995)

Year	Hazardous Wastes		Generation Rate (lbs)	Source App A
1992	Corrosive liquids Adhesive flammable liquids Silver film (solid hazardous waste)	Waste petroleum naphtha Lead filters	68,369	48,21
1993	Photographic chemical kits Sodium hypochlorite Photographic cleaner/fixer trays Toner (Bell and Howell brand)	Photocolor chrome kits Lead acid batteries Decontaminating agents	3,189	48,3
1994	Nicad batteries Lead acid batteries Lindane Cleaning solvents Denatured alcohol Sodium hypochlorite Photographic fixer bath Alkaline liquids	Lithium batteries Enamel spray paint Methyl alcohol Fuel oil No. 1-kero Decontaminating agents Ammonium hydroxide Industrial cleaners Aqueous ammonia	735,015	48,3
1995	Lead contaminated debris Flammable liquid glass cleaner Photographic developer/toner kits Sodium hypochlorite solution	Toner Adhesive aerosols Waste flammable liquids Cleaning solvents	6,383	48,3

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Table B-3.
History of Hazardous Substance and Petroleum Products Spills and Remediation^a
Fort Ritchie Army Garrison

Date	Location	Hazardous Material	Quantity	Media Impacted	Remediation	Source App A
8/8/84	AAFES Service Station (515)	Unleaded Gasoline	1570 gallons	Soil, Concrete, Possible Ground water	Initial release to the surface was cleaned up with sorbents. A leaking flexible elbow was replaced with a straight pipe. Three groundwater monitoring wells were installed one month later in 9/84. Fifteen boreholes and nine additional monitoring wells were drilled in a study conducted in summer 1991.	11,12, 49,60,61
3/4/91	Housing (486)	No. 2 fuel oil	125 gallons	Soil	UST was pumped out and a bin placed at the outfall. Monitoring well installed and soil samples collected for TPH.	15,49
8/8/91	Lake Royer	Paint	Unknown	Surface Water	Clumps of paint floating on surface of water were skimmed off; remaining paint mixed and dispersed with lake water and discharged with lake outfall.	21,68
1/14/92	Golf Maintenance Building (5)	No. 2 fuel oil	150 gallons	Concrete floor, Soil, Surface Water	Some oil recovered from the manway; some oil recovered from the basement; some oil pumped into Lake Royer. Soil sample was collected. 2 monitoring wells were installed and sampled.	11,12, 49,62, 63,66
4/28/93	Autocraft shop (401)	Hydraulic oil	30 gallons	Asphalt	Spilled fluid was contained with adsorbents and removed from site.	68
6/11/93	Lakeside Club (11)	Hydraulic oil	50 gallons	Soil	Spilled fluid was contained with adsorbents and removed from site. Surface soil was removed from site.	68
7/29/93	Housing unit (724)	No. 2 fuel oil	310 gallons	Soil	Adsorbents were used on soil and in the lake to contain and remove spilled fuel. Two inches of surface soil were removed.	68

^a Spills documented in this table include only releases which are known to have occurred to surficial media. Releases of hazardous substances/materials to the subsurface are summarized with the UST information, Section 3.2.7, and presented in detail in Appendix D.

Table B-3. (continued)
History of Hazardous Substance and Petroleum Products Spills and Remediation^a
Fort Ritchie Army Garrison

Date	Location	Hazardous Material	Quantity	Media Impacted	Remediation	Source App A
8/16/93	Adjacent to Lake Wastler	Hydraulic fluid	<1 gallon	Sediment	Adsorbent pads were used to contain and remove spilled substance. Surface sediment was removed from the site.	68
2/12/94	Scientific Operations (152)	Engine oil and antifreeze	5 gallons	Asphalt	Spilled fluid was contained with adsorbents and removed from site.	68
3/14/94	Community Center (102)	No. 2 fuel oil	25 gallons	Soil	Spilled fluid was contained with adsorbents and removed from site.	68
3/30/94	Lakeside Club (11)	Hydraulic oil	1 gallon	Asphalt	Spilled fluid was contained with adsorbents and removed from site.	68
4/22/94	Admin (148)	Hydraulic fluid	5 gallons	Asphalt	Spilled fluid was contained with adsorbents and removed from site.	68
11/30/94	Grambacher Street	Motor oil	0.5 gallons	Asphalt	Spilled fluid was contained with adsorbents and removed from site.	68
12/6/94	Motor Pool (700)	Diesel fuel	1.5 gallons	Asphalt	Spilled fluid was contained and removed from site with adsorbents.	68
1/31/95	Autocraft shop (401)	Waste oil	7.5 gallons	Floor and Soil	Spilled fluid was contained with adsorbents and removed from site.	68
4/14/95	Motor Pool (700)	No. 2 fuel oil	11 gallons	Asphalt	Spilled fluid was contained with adsorbents and removed from site.	68

^a Spills documented in this table include only releases which are known to have occurred to surficial media. Releases of hazardous substances/materials to the subsurface are summarized with the UST information, Section 3.2.7, and presented in detail in Appendix D.

Table C.
Summary of Annual Emissions of VOCs and Criteria Pollutants
Fort Ritchie Army Garrison

Source Category ^a	VOC (ton/yr)	NO _x (ton/yr)	CO (ton/yr)	SO _x (ton/yr)	PM ₁₀ (ton/yr)	TSP (ton/yr)	Source App A
Boilers ^b	0.23	7.97	1.80	12.86	0.36	0.73	13
Generators	0.25	3.0	0.86	0.2	N/A	0.21	13
Underground Storage Tanks	0.01	N/A	N/A	N/A	N/A	N/A	13
Above Ground Storage Tanks	0.07	N/A	N/A	N/A	N/A	N/A	13
Gasoline Service Station	1.98	N/A	N/A	N/A	N/A	N/A	13
Degreasers	0.83	N/A	N/A	N/A	N/A	N/A	13
Painting/Surface Coating Operations	0.88	N/A	N/A	N/A	<0.01	<0.01	13
Pesticide Applications	0.06	N/A	N/A	N/A	N/A	N/A	13
Welding Operations	N/A	N/A	N/A	N/A	<0.01	<0.01	13
Woodworking Operations	N/A	N/A	N/A	N/A	2.1	5.28	13
Miscellaneous Chemicals	0.47	N/A	N/A	N/A	N/A	N/A	13
TOTAL	4.78	10.97	2.66	12.86	2.46	6.22	13

^a Emissions calculations were not performed for the indoor firing range or for incinerators at Fort Ritchie.
^b Boilers are located at the following buildings: 11, 113, 160, 313, 360, 400, 402, 500, 503, 518, 603, and 837.

N/A Not Applicable
VOC Volatile Organic Compounds
NO_x Nitrogen Oxides
CO Carbon Monoxide
SO_x Sulfur Oxides
PM₁₀ Particulate Matter less than 10 microns in diameter
TSP Total Suspended Particulates

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**Table D-1.
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
2	Theater	R 048 A	Old: 10/79 Rmv: 1/19/93 New: 6/93	Old: 4000 New: 6000	Diesel	Replaced	76.25 tons of contaminated soil were removed. Soil sample concentration was 100 mg/kg at 2' below tank grade. Some overfilling was detected; lines were in sound condition. 1 monitoring pipe was installed and sampled on 4/5/93. No contamination was detected.	11,12,49
3	Gym	R 001 A	Old: <1965 Rmv: NA New: 2/91	Old: 5000 steel New: 6000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed and sampled on 3/18/91. No contamination was detected.	11,12,49,62
4	Position Quarters	001 P	Old: <1965 Rmv: 1996	1000	No. 2 fuel oil	Removed	Existing UST was removed and replaced with a propane tank in May 1996. Storage tanks were cleaned on 7/31/95.	43,44,49

xxx A = Administration area tank
xxx G = Maryland National Guard Armory (MNGA)
xxx H = Housing tank, regulated
xxx N = Housing tank, Not regulated

xxx P = Position Quarters tank, Not regulated
R xxx = Tank has been replaced
U xxx = Tank upgraded to 1988 requirements
X xxx = Tank has been removed

FRP = Fiber Glass Reinforced Plastic
NA = Information Not Available
Rmv: = Date tank was removed
Abnd: = Date tank was abandoned

**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
5	Golf Course Maintenance	R 002 A	Old: <1965 Rmv: NA New: 2/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	≈150-gals of No. 2 fuel spilled into the tank manway on 1/14/92. 80-gals were recovered from the manway, 50-gals recovered from the basement, and 20-gals pumped by sump into Lake Royer. Soil sample concentration was 100 mg/kg TPH. 2 monitoring pipes were installed and sampled on 3/4/91. No contamination was detected.	11,12, 49,62, 63,66
11	Lakeside Club	R 062 A	Old: 11/81 Rmv: NA New: 1/94	Old: 8000 New: 6000	No. 2 fuel oil	Replaced		49
100	Main Store	R 067 A	Old: 3/82 Rmv: NA New: 12/93	Old: 5000 New: 6000	No. 2 fuel oil	Replaced Removed	Old tank was replaced in 1993. The new tank was later removed with building demolition in 11/95.	49
102	Community Center	R 068 A	Old: 3/82 Rmv: NA New: 12/93	Old: 5000 New: 6000	No. 2 fuel oil	Replaced	UST was overfilled on 3/14/94. < 25-gals was released, staining the grass and snow.	49,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
113	Heat Pl Bldg	R 069 A	Old: 3/82 Rmv: 11/9/92 New: 5/93	Old: 10000 steel New: 8000 steel	No. 2 fuel oil	Replaced	Double walled steel tank material meets 1998 standards. Soil sample concentration taken on 1/8/93 was < 5 mg/kg TPH.	11, 12, 49
123	Provost Marshall	R 070 A	Old: 4/82 Rmv: NA New: 8/93	Old: 3000 New: 2500	No. 2 fuel oil	Replaced		49
124	Access Facility	R 004 A	Old: <1965 Rmv: NA New: 3/91	Old: 1000 steel New: 2500 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed and sampled on 10/25/91. No contamination was detected.	11, 12, 49, 62
130	Front gate Admin	R 044 A	Old: 11/78 Rmv: 7/30/93 New: 8/93	Old: 1000 steel New: 1000 FRP	diesel	Replaced	110.23 tons of contaminated soil was removed. Soil sample concentration was 120 mg/kg at 2' below tank grade. Some overfilling was detected; lines were in sound condition. 1 monitoring pipe was installed and sampled on 7/21/93. No contamination was detected.	11, 12, 49
131	Admin	R 005 A	Old: <1965 Rmv: NA New: 3/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed and sampled on 4/11/91. Concentrations were .5 and 1.7 mg/kg respectively.	11, 12, 49, 62

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Abnd: = Date tank was abandoned

Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
132-33	Office of Acquisition	054 A	Old: 6/80 Rmv: NA New: NA	Old: 2000 New: 1000	No. 2 fuel oil	Replaced		49
134	Office of Acquisition	055 A	Old: 6/80 Rmv: NA New: NA	Old: 1000	No. 2 fuel oil	Removed	Tank was removed at demolition of Bldg 135 in FY94.	49
136-37	USAISEC-CONUS Admin	R 049 A	Old: 10/79 Rmv: 5/7/93 New: 8/93	Old: 2000 New: 2500	No. 2 fuel oil	Replaced	178.75 tons of soil was removed. ≈6" of water was found in the excavation. The Army overexcavated to remove contaminated soil. Soil sample concentration was 4200 mg/kg at 2' below tank grade. 1 monitoring pipe was installed and sampled on 7/21/93. No contamination was detected.	11,12,49
138-39	USAISEC-CONUS	R 006 A	Old: <1965 Rmv: NA New: 3/91	Old: 1000 steel New: 2500 FRP	No. 2 fuel oil	Replaced	6.1 cubic yards (16" deep) of contaminated soil was removed. 2 monitoring pipes were installed and sampled on 4/15/91. No contamination was detected.	11,12,49,62

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U xxx = Tank upgraded to 1988 requirements
X xxx = Tank has been removed

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
141	Electric Maintenance Shop	R 007 A	Old: <1965 Rmv: 4/2/91 New: 4/26/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	6.1 cubic yards (1' deep) of contaminated soil was removed due to overfill. Tank was in sound condition. 2 monitoring pipes were installed and sampled on 4/22/91. No contamination was detected.	11,12, 49,62
143	USAISEC-CONJUS	063 A	Old: 10/81 Rmv: NA New: NA	Old: 2000	No. 2 fuel oil	Existing	Tank will be tested periodically until building demolition or 1998 when tank is planned to be removed.	49
147	Finance Admin	R 008 A	Old: <1965 Rmv: 10/8/91 New: 5/23/91	Old: 1500 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 8/19/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
148-49	Admin	R 009 A	Old: <1965 Rmv: 10/8/91 New: 6/13/91	Old: 2000 steel New: 2500 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 10/15/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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X xxx = Tank has been removed

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Rmv: = Date tank was removed
Abnd: = Date tank was abandoned

Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
150	Drug/Alcohol Center	R 010 A	Old: <1965 Rmv: 10/8/91 New: 5/23/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 8/19/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchle Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
151	Finance Admin	R 050 A	Old: 10/79 Rmv: NA New: 5/93	Old: 1000 New: 1000	diesel	Replaced	Some evidence of overfilling was found. Soil sample concentration was 480-1600 mg/kg at 2' below tank grade. Water with sheen was encountered at 4' below tank grade. Army overexcavated and dewatered hole. 336.14 tons of soil was removed. Soil sample concentration was 498 mg/kg at 2' below tank grade. 1 monitoring pipe was installed between the 2 tanks and sampled on 7/21/93. Concentration exceeded 100 mg/kg TPH. Numerous holes and pitting were observed on the tank; lines were in sound condition. Soil sample concentration was 500-1500 mg/kg at 2' below tank grade. Solids and sludge was removed.	11,12, 49,58
151-A	Finance Admin	X 096 A	Old: NA Rmv: 8/93 New: NA	1000	diesel	Removed		11,12, 49,58

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X xxx = Tank has been removed

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Rmv: = Date tank was removed
Abnd: = Date tank was abandoned

**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
152	Scientific Operations	U 083 A	Old: 7/88 Rmv: NA New: 8/93	Old: 4000 New: 4000 FRP	No. 2 fuel oil	Replaced	FRP, single walled material for the new tank.	49
152-D	Scientific Operations	U 084 A	Old: 7/88 Rmv: NA New: 8/93	Old: 550 New: 550 FRP	No. 2 fuel oil	Replaced	FRP, single walled material for the new tank.	49
155	Position Quarters	002 P	Old: <1965 Rmv: 1996	550	No. 2 fuel oil	Removed	Existing fuel UST was removed in May 1996 and replaced with a propane tank.	43,44,49
160	Telecom Facility	R 011 A	Old: <1965 Rmv: 4/11/91 New: 5/2/91	Old: 8000 steel New: 6000 FRP	No. 2 fuel oil	Replaced	32.5 cubic yards of contaminated soil was removed. 2 monitoring pipes were installed and sampled before 2/92. No contamination was detected.	11,12, 49,62
162-D	Generator Bldg	R 081 A	Old: 3/84 Rmv: NA New: 1/94	Old: 4000 New: 2500	diesel	Replaced		49
200	Post HQ	R 082 A	Old: 1985 Rmv: NA New: 1/94	Old: 1000 New: 2500	No. 2 fuel oil	Replaced		49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
201	Admin	R 012 A	Old: <1965 Rmv: 4/19/91 New: 4/23/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 5/10/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
202	Library	R 051 A	Old: 10/79 Rmv: 4/30/93 New: 8/93	Old: 1000 New: 1000	No. 2 fuel oil	Replaced	91.84 tons of soil was removed. Some overfilling was detected; lines were in sound condition. Soil sample: 2500 mg/kg at 2' above grade. 1 monitoring well was installed and sampled on 7/21/93. No contamination detected.	11,12,49
203-04	Post HQ	R 071 A	Old: 3/82 Rmv: NA New: 8/93	Old: 5000 New: 2500	No. 2 fuel oil	Replaced		49
205	Admin	R 013 A	Old: <1965 Rmv: 5/2/91 New: 4/26/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 5/29/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
301	Photo Lab	R 056 A	Old: 6/80 Rmv: NA New: 8/93	Old: 1000 New: 1000	No. 2 fuel oil	Replaced		49
302	Chapel	R 052 A	Old: 10/79 Rmv: 2/2/93 New: 6/93	Old: 1000 New: 1000	diesel	Replaced	69.09 tons of soil was removed. Soil sample concentration was 60-90 mg/kg at 1' below tank grade and 530 mg/kg below that. Some overfilling was detected; lines were in sound condition. > 1 monitoring pipe was installed and sampled on 4/5/93. No contamination was detected.	11,12,49
302-R	Chapel	X 053 A	Old: 10/79 Rmv: 1/15/93	Old: 1000	diesel	Removed	51.92 tons of soil was removed. Soil sample concentration was 720 mg/kg at 1' below tank grade and 0-48 mg/kg below that. Some overfilling was detected; lines were in sound condition. > 1 monitoring pipe was installed and sampled on 4/5/93. No contamination was detected.	11,12,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
303	Admin	R 014 A	Old: <1965 Rmv: 7/30/91 New: 11/1/91	Old: 5000 steel New: 2500 FRP	Old: gasoline New: diesel	Replaced	Tank also feeds a diesel generator. 10.6 cubic yards contaminated soil was removed to 1' below tank. 2 monitoring pipes were installed and sampled on 10/29/91. No contamination was detected.	11,12, 49,62
305	SE Admin	R 064 A	Old: 3/81 Rmv: NA New: 8/93	Old: 1000 New: 1000	No. 2 fuel oil	Replaced		49
313	SE Admin	R 072 A	Old: 4/82 Rmv: NA New: 5/93	Old: 10000 New: 8000 steel	No. 2 fuel oil	Replaced	Double walled steel tank material meets 1998 standards. TPH <5 mg/kg. Sampled 1/10/93.	11,12,49
323	Photo Lab	R 015 A	Old: <1965 Rmv: 6/91 New: 7/9/91	Old: 1500 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
324-25	Enlisted barracks	085 A	Old: 10/88 Rmv: NA New: NA	1000	No. 2 fuel oil	Existing	Tanks will be tested periodically until building demolition or 1998.	49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
326	Museum	R 016 A	Old: <1965 Rmv: 7/18/91 New: 8/12/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 10/21/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table). 2 holes were observed on top of tank.	11,12, 49,62
327	Access Facility	R 017 A	Old: <1965 Rmv: NA Abnd: 7/16/91	Old: 1000	No. 2 fuel oil	Abandoned in Place	Tank was filled with concrete and abandoned. Soil sample concentration was 5450 mg/kg TPH. 2 monitoring pipes were installed. Attempted to sample them on 7/16/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
330	SE Admin	R 045 A	Old: 12/78 Rmv: 2/8/93 New: 6/93	Old: 550 New: 1000	diesel	Replaced	58.65 tons of soil was removed. Soil sample concentration taken on 4/5/93 was 19,074 mg/kg at 2' below tank grade. Some overfilling was detected; lines were in sound condition. There is no piping from this tank.	11,12,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
332-33	Dental Clinic	R 018 A	Old: <1965 Rmv: 9/3/91 New: 11/1/91	Old: 2000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed and sampled on 10/24/91. No contamination was detected.	11,12, 49,62
334-35	Admin	R 019 A	Old: <1965 Rmv: 1/31/91 New: 2/20/91	Old: 2000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	14.66 cubic yards (2' below tank grade) of contaminated soil and 200-gals of contaminated water was removed. 2 monitoring pipes were installed and sampled on 3/7/91. Concentrations were 'non-detect' and 0.5 mg/kg respectively.	11,12, 49,62
336-37	Educational Center	086 A	Old: 8/89 Rmv: NA New: NA	2000	No. 2 fuel oil	Existing	Double walled steel tank material meets 1998 standards. 2 monitoring pipes were installed and sampled before 9/92. No contamination was detected.	49,62
-341	Health Clinic	R 020 A	Old: <1965 Rmv: 8/5/91 New: 8/15/91	Old: 2000 steel New: 2500 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 10/31/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

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Bldg No.	Bldg Usage							
343	SE Admin	R 073 A	Old: 12/82 Rmv: NA New: 8/93	Old: 1000 New: 1000	No. 2 fuel oil	Replaced		49
346	Wood Skill Center	R 021 A	Old: <1965 Rmv: NA New: 9/3/91	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced	Contaminated soil was removed. 2 monitoring pipes installed. Attempted to sample them on 11/5/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
349-50	Personnel Admin	R 022 A	Old: <1965 Rmv: 8/27/91 New: 8/25/91	Old: 3000 steel New: 2500 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 10/28/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
351	Family Support	XR 023 A	Old: <1965 Rmv: NA New: 9/19/91 Rmv: 4/93	Old: 1000 steel New: 1000 FRP	No. 2 fuel oil	Replaced Removed	2 monitoring pipes were installed. Attempted to sample them on 10/25/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table). New tank was removed 2 years after installation in 4/93 with building demolition.	11,12, 49,62
360	Maintenance Shop	R 074 A	Old: 3/82 Rmv: NA New: 12/93	Old: 10000 New: 10000	No. 2 fuel oil	Abandoned Replaced	Old tank was abandoned in place due to water and electrical lines. The tank was filled with concrete. There was no suspected contamination. New tank was installed.	49,57
400	Barracks	R 024 A	Old: <1965 Rmv: 6/13/91 New: 10/8/91	Old: 8000 steel New: 10000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 10/16/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
401	Auto Skills Center	R 025 A	Old: <1965 Rmv: 5/2/91 New: 8/12/91	Old: 2000 steel New: 2500 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 6/17/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
402-03	CO HQ Bldg	R 026 A	Old: <1965 Rmv: 8/5/91 New: 10/8/91	Old: 10000 steel New: 10000 FRP	No. 2 fuel oil	Replaced	Old vent pipe remained in place after removal of the tank. Contractor removed the pipe in 1/93. 2 monitoring pipes were installed. Attempted to sample them on 10/18/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,50,62
500	CO HQ Bldg	R 027 A	Old: <1965 Rmv: 8/27/91 New: 9/8/91	Old: 4000 steel New: 6000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 11/1/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
502	Fire Station	057 A	Old: 1980 Rmv: NA New: NA	Old: 1000 Rmv: 5/95	No. 2 fuel oil	Removed	Tank was removed with building demolition in FY94. A new fire station was constructed.	49
503	Classrooms	R 029 A	Old: <1965 Rmv: 4/18/91 New: 8/12/91	Old: 8000 steel New: 4000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed and sampled on 8/12/91. No contamination was detected.	11,12, 49,62
503-R	Classrooms	X 030 A	Old: <1965 Rmv: 4/18/91	Old: 550 steel	No. 2 fuel oil	Removed		11,12,49
504	Exchange Outlet	R 058 A	Old: 6/80 Rmv: NA New: 8/93	Old: 550 New: 1000	No. 2 fuel oil	Replaced		49
506	Childhood Development Center	R 076 A	Old: 1983 Rmv: NA New: 12/93	Old: 5000 New: 6000	No. 2 fuel oil	Replaced		49
507-8	Old Commissary	X 075 A	Old: 12/82 Rmv: 4/15/94 New: NA	Old: 10000 New: 10000 FRP	No. 2 fuel oil	Removed	Tank was removed with building demolition in FY94. A new Commissary was constructed.	11,12,49
509	Bowling Center	R 077 A	Old: 1983 Rmv: NA New: 12/93	Old: 3000 New: 4000	No. 2 fuel oil	Replaced		49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
515-U	Service Station	R 039 A	Old: 1973 Rmv: 10/92	Old: 850 FRP	Waste Oil	Removed	A 1984 gasoline spill was cleaned up as part of the tank replacement plan. Records do not indicate which tank at Bldg 515 was involved.	49,60,65
515	Service Station	R 040 A	Old: 1973 Rmv: NA New: 8/13/92	Old: 2000 New: 2500 FRP	No. 2 fuel oil	Replaced		11,12, 49,60,61
515-R	Service Station	R 041 A	Old: 1973 Rmv: NA New: 8/13/92	Old: 10000 FRP New: 10000 FRP	gasoline (Regular)	Replaced	Sump water was tested around Bldg 515. Monitoring wells were installed and sampled on 9/28/92. No contamination was detected.	11,12, 49,60,61
515-P	Service Station	R 042 A	Old: 1973 Rmv: NA New: 8/13/92	Old: 10000 FRP New: 10000 FRP	gasoline (Premium)	Replaced		11,12, 49,60,61
515-S	Service Station	R 043 A	Old: 1973 Rmv: NA New: 8/13/92	Old: 10000 FRP New: 10000 FRP	gasoline (Super)	Replaced	Water and 398.10 cubic yards of soil was removed around Bldg 515.	11,12, 49,60,61
517	Main Store	093 A	Old: 5/92 Rmv: NA New: NA	4000 FRP	No. 2 fuel oil	Existing		49
518	Commissary	097 A	Old: 8/94 Rmv: NA New: NA	40000	No. 2 fuel oil	Existing		49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
520	Guest House	065 A	Old: 11/81 Rmv: NA New: 3/90	Old: 2000 New: 2000 steel	No. 2 fuel oil	Replaced	Double walled steel tank material meets 1998 standards. 2 monitoring pipes were installed and sampled before 9/92. No contamination was detected.	43,49,62
521	Youth Activity Center	R 078 A	Old: 1983 Rmv: NA New: 12/93	Old: 3000 New: 4000	No. 2 fuel oil	Replaced		49
603	DEH Facility	R 059 A	Old: 2/80 Rmv: NA New: 1/94	Old: 5000 New: 10000	No. 2 fuel oil	Replaced	Waterline was adjacent to the old tank location, so the new tank was relocated behind the building.	49,53
603-R	DEH Facility	X 060 A	Old: 2/80 Rmv: 1/94 New: NA	Old: 4000	No. 2 fuel oil	Removed	Samples showed contamination.	49,53

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
605-A	DEH Facility	094 A	Old: NA Abnd: 1950 Rmv: NA	Unknown	gasoline	Abandoned in Place	Tank was abandoned with sand in 1950. Excavation on 10/10/91 around this building revealed a sheen of petroleum products on the surface of the water table which was very high. The sheen was attributed to an AST that was once located in the area.	19,49,64
605-B	DEH Facility	095 A	Abnd: 1950 Rmv: NA	Unknown	gasoline	Abandoned in Place		49,64
607	Admin	092 A	Old: 10/90 Rmv: NA New: NA	2000 steel	No. 2 fuel oil	Existing	Double walled steel tank material meets 1998 standards. 2 monitoring pipes were installed. Attempted to sample them before 9/92 but were dry. (Pipes were installed to a depth of 2 feet below tank bottom).	49,62
700-A	Motor Pool	R 031 A	Old: <1965 Rmv: NA New: 9/17/91	Old: 2000 steel New: 6000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed and sampled on 11/4/91. No contamination was detected.	11,12, 47,49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
700-B	Motor Pool	R 037 A	Old: 1966 Rmv: NA New: 3/91	Old: 10000 steel New: 10000 FRP	gasoline	Replaced	2 monitoring pipes were installed and sampled before 9/92. No contamination was detected.	11,12, 47,49, 55,62
700-C	Motor Pool	R 038 A	Old: 1966 Rmv: NA New: 3/91	Old: 10000 steel New: 6000 FRP	Old: gasoline New: diesel	Replaced	2 monitoring pipes were installed and sampled before 9/92. No contamination was detected.	11,12, 47,49, 55,62
700-D	Motor Pool	X 036 A	Old: 1966 Rmv: 3/91	Old: 5000 steel	diesel	Removed	A spilled occurred during filling on 14 April 1995. ≈11-gals of No. 2 diesel was released. The fill hose to the vapor recovery port was clamped, but some fuel spilled out of the vent. No oil was released to soil.	11,12, 47,49
700-E	Motor Pool	X 087 A	Unknown	unknown	unknown	Removed	Tank was removed in 3/91	11,12, 47,49
700-F	Motor Pool	X 088 A	Unknown	unknown	unknown	Removed	Tank was removed in 3/91	11,12, 47,49
710	Position Quarters	X 003 P	Old: <1965 Rmv: 12/91	550	No. 2 fuel oil	Removed	Old UST was replaced with an underground propane tank.	49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
716	EEO Office	R 061 A	Old: 1980 Rmv: NA New: 8/93	Old: 550 New: 600	No. 2 fuel oil	Replaced	2 monitoring pipes were installed in a grass area directly south of building and sampled before 9/92. No contamination was detected.	49,62
716-A	EEO Office	X 089 A	Unknown	6000 steel	unknown	Removed	6000-gal steel gas tank was removed on 7/15/91. >200 cubic yards of contaminated soil was removed. Soil sample concentration was >500 ppm TPH.	11,12,49
716-B	EEO Office	X 090 A	Unknown	6000 steel	unknown	Removed	6000-gal steel gas tank was removed on 7/15/91.	11,12,49
716-C	EEO Office	X 091 A	Unknown	3000 steel	unknown	Removed	3000-gal steel gas tank was removed on 7/15/91.	11,12,49
(734) 735-U	DEH Facility	R 066 A	Old: 1981 Rmv: NA New: 8/93	Old: 550 New: 600	waste oil	Replaced	UST at Bldg 734 is not regularly checked for contents, no records of the amount of oil put into the tank is kept, and no overall spill control exists. In 8/94, a new UST was installed with direct reading gauge.	49,50,55

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
800	UOQ	XR 032 A	Old: <1965 Rmv: 5/20/91 New: 6/3/91 Rmv: 12/3/93	Old: 3000 steel New: 6000 FRP	No. 2 fuel oil	Replaced Removed	2 monitoring pipes were installed and sampled on 11/7/91. No contamination was detected. New tank was removed two years later (12/3/93) and replaced with a temporary above ground propane tank. Now the building is connected to the tank farm and the existing empty LPG will be used at one of the position quarters.	11,12, 49,62
811	Position Quarters	004 P	Old: <1965 Rmv: 1995	550	No. 2 fuel oil	Removed	Old UST was replaced with an underground propane tank and will be tied to the tank farm later.	43,44,49
829-31	Thrift Shop	XR 033 A	Old: <1965 Rmv: 5/10/91 New: 8/21/91	Old: 2000 steel New: 4000 FRP Rmv: 4/93	No. 2 fuel oil	Replaced Removed	Tank was removed with the demolition of the building. 2 monitoring pipes were installed. Attempted to sample them on 6/20/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
834	Outdoor Recreation Center	R 046 A	Old: 11/78 Rmv: 4/30/93 New: 8/93	Old: 550 New: 1000	diesel	Replaced	61.29 tons of contaminated soil was removed. Soil sample concentration taken on 7/21/93 was 4900 mg/kg at 2' below tank grade. Had to over-excavate and resample until nondetect. Several corrosion holes and some pitting were observed. Tank was cut for scrap.	11,12,49,51
835	Water Treatment	X 034 A	Old: <1965 Rmv: 5/23/91	Old: 550 steel	unknown	Removed	Tank was piped to Bldg 836.	11,12,49
835-36	Water facilities (Pool)	R 047 A	Old: 1978 Rmv: 3/10/93 New: 6/93	Old: 2000 New: 2500	diesel	Replaced	Tank was piped to Bldg 835. Some overfilling and spillage at the vent line was detected; lines were in sound condition. Soil sample concentration was 200 mg/kg at 2' below tank grade and 60 mg/kg at vent line excavation. 91.12 tons of soil was removed around the tank and 22.10 tons around the vent line. No record of groundwater sample taken.	11,12,49

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Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
837	Warehouse	R 035 A	Old: <1965 Rmv: 5/29/91 New: 10/8/91	Old: 6000 steel New: 6000 FRP	No. 2 fuel oil	Replaced	2 monitoring pipes were installed. Attempted to sample them on 8/28/91 but were dry. (Pipes were installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	11,12, 49,62
860	Position Quarters	005 P	Old: <1965 Rmv: 1995	1000	No. 2 fuel oil	Removed	Old UST was replaced with an underground propane tank and will be tied to the tank farm later.	43,44,49
MNGA-H	Md National Guard	001 G	Old: 12/94 Rmv: NA New: NA	4000 Steel	No. 2 fuel oil	Existing	Double walled steel tank material meets 1998 standards. MNGA is POC. One of the MNGA USTs failed leak test twice, but no noticeable spills.	46,49
MNGA-D	Md National Guard	002 G	Old: 2/95 Rmv: NA New: NA	1500 Steel	diesel	Existing	Double walled steel tank material meets 1998 standards. MNGA is POC	46,49
450-1	Housing	001 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
450-2	Housing	143 H	Old: 11/89 Rmv: 12/93	550	No. 2 fuel oil	Removed		49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
450-3	Housing	131 H	Old: 3/81 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
450-4	Housing	R 002 H	Old: 11/90 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
451-1	Housing	125 H	Old: 12/77 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
451-2	Housing	003 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
451-3	Housing	004 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
452-1	Housing	144 H	Old: 9/89 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
452-2	Housing	005 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
452-3	Housing	006 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
452-4	Housing	007 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
453-1	Housing	008 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
453-2	Housing	R 009 H	Old: 3/91 Rmv: 12/93	550	No. 2 fuel oil	Removed		49

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Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
453-3	Housing	010 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
454-2	Housing	132 H	Old: 2/81 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
454-4	Housing	011 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
455-1	Housing	012 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
454-3	Housing	013 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
454-4	Housing	R 014 H	Old: 3/92 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
455-1	Housing	R 015 H	Old: 4/90 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
455-2	Housing	R 016 H	Old: 4/90 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
455-3	Housing	R 017 H	Old: 4/90 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
455-4	Housing	018 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
457-1	Housing	019 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed	1 monitoring pipe was installed at Bldg 457.	49,62

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Underground Storage Tank Inventory
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Bldg No.	Bldg Usage							
457-2	Housing	020 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
457-3	Housing	133 H	Old: 8/84 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
457-4	Housing	021 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
458-1	Housing	126 H	Old: 8/79 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
458-2	Housing	022 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
458-3	Housing	023 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
458-4	Housing	001 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
459-1	Housing	134 H	Old: 1984 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
459-2	Housing	024 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
459-3	Housing	025 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
460-1	Housing	002 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49

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Underground Storage Tank Inventory
Fort Ritchie Army Garrison

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Bldg No.	Bldg Usage							
460-2	Housing	026 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
460-3	Housing	027 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
460-4	Housing	003 N	Old: 4/91 Rmv: 12/93	275	No. 2 fuel oil	Removed		49
461-1	Housing	028 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
461-2	Housing	145 H	Old: 11/89 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
461-3	Housing	029 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
462-1	Housing	030 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
462-2	Housing	031 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
462-3	Housing	032 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
462-4	Housing	033 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
463-1	Housing	034 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49

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 U xxx = Tank upgraded to 1988 requirements
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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
463-2	Housing	035 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
463-3	Housing	127 H	Old: 9/79 Rmv: 12/93	550	No. 2 fuel oil	Removed	Tank was filled with concrete under AC pad.	49
463-4	Housing	036 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
464-1	Housing	037 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
464-2	Housing	038 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
464-3	Housing	039 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
464-4	Housing	R 040 H	Old: 12/90 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
465-1	Housing	041 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
465-2	Housing	136 H	Old: 10/88 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
465-3	Housing	042 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
465-4	Housing	043 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
466-1	Housing	004 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
466-2	Housing	044 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
466-3	Housing	045 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
466-4	Housing	005 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
467-1	Housing	006 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
467-2	Housing	046 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
467-3	Housing	047 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
467-4	Housing	007 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
468-1	Housing	X 033 N	Old: 12/89 Rmv: 3/92	275	No. 2 fuel oil	Removed	Soil sample taken. No contamination detected.	16,49
468-2	Housing	X 048 H	Old: NA Rmv: 1/92	550	No. 2 fuel oil	Removed	Soil sample taken. No contamination was detected.	16,49
468-3	Housing	X 008 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed	Soil sample taken. No contamination was detected.	16,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
469-1	Housing	X 049 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed		16,49
469-2	Housing	X 050 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed		16,49
470-1	Housing	X 009 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed	Contamination was present; 1.5 tons of soil was removed. Monitoring pipe 470-1 was installed and was dry. (Pipe was installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	16,49,62
470-2	Housing	X 128 H	Old: 8/79 Rmv: 12/93	550	No. 2 fuel oil	Removed		16,49
470-3	Housing	X 010 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed	Contamination was present; 1.6 tons of soil was removed. Monitoring pipe 470-3 was installed and was dry. (Pipe was installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	16,49,62
471-1	Housing	X 051 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed		16,49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
471-2	Housing	X 052 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed		16,49
472-1	Housing	X 011 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed		16,49
472-2	Housing	X 053 H	Old: NA Rmv: 1/92	550	No. 2 fuel oil	Removed		16,49
472-3	Housing	X 054 H	Old: NA Rmv: 1/92	550	No. 2 fuel oil	Removed		16,49
473	Housing	X 146 H	Old: 5/89 Rmv: 2/91	1000	No. 2 fuel oil	Removed		16,49
474-1	Housing	X 012 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed		16,49
474-2	Housing	X 055 H	Old: NA Rmv: 1/92	550	No. 2 fuel oil	Removed		16,49
474-3	Housing	X 032 N	Old: 8/89 Rmv: 1/92	275	No. 2 fuel oil	Removed		16,49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
475-1	Housing	X 056 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.1 tons of soil was removed. Monitoring pipe 475 was installed and was dry. (Pipe was installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	16,49,62
475-2	Housing	X 057 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 475 was installed and was dry. (Pipe was installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	16,49,62
476-1	Housing	X 013 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed		16,49
476-2	Housing	X 058 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed		16,49
476-3	Housing	X 014 N	Old: NA Rmv: 1/92	275	No. 2 fuel oil	Removed		16,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
477-1	Housing	X 059 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 477 was installed and was dry. (Pipe was installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	16,49,62
477-2	Housing	X 060 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 477 was installed and was dry. (Pipe was installed only to a depth of 2-ft below tank bottom which may not have reached the water table).	16,49,62
478-1	Housing	X 061 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
478-2	Housing	X 062 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
479-1	Housing	X 063 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 479 was installed. No contamination was detected.	16,49,62

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
479-2	Housing	X 064 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 479 was installed. No contamination was detected.	16,49,62
480-1	Housing	X 015 N	Old: NA Rmv: 3/92	275	No. 2 fuel oil	Removed		15,49
480-2	Housing	X 130 H	Old: 1/80 Rmv: 12/93	550	No. 2 fuel oil	Removed	Contamination was present; 7 tons of soil was removed. Monitoring pipe 480 was installed. No contamination was detected.	15,49,62
480-3	Housing	X 016 N	Old: NA Rmv: 3/92	275	No. 2 fuel oil	Removed		15,49
481-1	Housing	X 065 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 481 was installed. No contamination was detected.	16,49,62
481-2	Housing	X 066 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Contamination was present; 6.0 tons of soil was removed. Monitoring pipe 481 was installed. No contamination was detected.	16,49,62

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
482-1	Housing	X 067 H	Old: NA Rmv: 12/91	550	No. 2 fuel oil	Removed	Monitoring pipe was installed.	15,49
482-2	Housing	X 068 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
483-1	Housing	X 069 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
483-2	Housing	X 070 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
484-1	Housing	X 034 N	Old: 9/89 Rmv: 3/92	300	No. 2 fuel oil	Removed		15,49
484-2	Housing	X 071 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
485-1	Housing	X 147 H	Old: 12/89 Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
485-2	Housing	X 072 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
486	Housing	X 073 H	Old: NA Rmv: 6/91	550	No. 2 fuel oil	Removed	Tank was found to be leaking on 3/4/91. UST was pumped out and a bin was placed at the outfall. ≈125-gals was lost. Monitoring pipe was installed. Soil samples taken in 8/92 were tested for TPHs. No contamination was detected.	15.49, 62.67
486-2	Housing	X 148 H	Old: 11/89 Rmv: 6/5/91	550	No. 2 fuel oil	Removed	A leak occurred on 3/4/91. UST was pumped out and berms were placed at the outfall of the leak. ≈125-gals was lost.	15.49
487-1	Housing	X 074 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15.49
487-2	Housing	X 075 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15.49
488-1	Housing	X 017 N	Old: NA Rmv: 3/92	275	No. 2 fuel oil	Removed		15.49
488-2	Housing	X 076 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15.49
488-3	Housing	X 018 N	Old: NA Rmv: 3/92	275	No. 2 fuel oil	Removed		15.49
489-1	Housing	X 035 N	Old: NA Rmv: 12/93	290	No. 2 fuel oil	Removed	2 monitoring pipes were installed.	15.49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
489-2	Housing	X 077 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed	Contamination was present; 7 tons of soil was removed. Monitoring pipe 489-2 was installed. No contamination was detected.	15,49,62
489-3	Housing	X 078 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed	Monitoring pipe was installed. (See above)	15,49,62
490-1	Housing	X 079 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49,62
490-2	Housing	X 080 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed	Contamination was present; 8 tons of soil was removed. Soil sample concentration was 613.1 mg/kg TPH. Monitoring pipe 490-2 was installed. No contamination was detected.	15,49,62
491-1	Housing	X 081 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed	Contamination was present; 8 tons of soil was removed. Monitoring pipe 491-1 was installed. No contamination was detected.	15,49,62
491-2	Housing	X 082 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed	Monitoring pipe was installed. (See above)	15,49,62
493-1	Housing	X 019 N	Old: NA Rmv: 3/92	275	No. 2 fuel oil	Removed		15,49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
493-2	Housing	X 083 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed	Contamination was present; 7 tons of soil was removed. Monitoring pipe 493 was installed. No contamination was detected.	15,49,62
493-3	Housing	X 020 N	Old: NA Rmv: 3/92	275	No. 2 fuel oil	Removed		15,49
495-1	Housing	X 084 H	Old: NA Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
495-2	Housing	X 137 H	Old: 7/88 Rmv: 3/92	550	No. 2 fuel oil	Removed		15,49
720	Housing	138 H	Old: 7/88 Rmv: 12/93	1000	No. 2 fuel oil	Removed		49
721	Housing	085 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
722	Housing	086 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
723	Housing	087 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
724	Housing	088 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed	310-gals of No. 2 fuel oil leaked on 29 July 1993. Hay bales and absorbent booms were placed in swales. Some oil flowed through the swales to the Lake Wastler. Sorbent booms were placed in the lake inlet and sorbents, sheets and pads were placed in the settling pond above the dam. The tank was removed and a propane tank was installed.	49,59,68
725	Housing	089 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
726	Housing	090 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
727	Housing	R 091 H	Old: 9/90 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
728	Housing	092 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
729	Housing	093 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
730	Housing	149 H	Old: 8/89 Rmv: 12/93	550	No. 2 fuel oil	Removed		49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
745	Housing	094 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
746-1	Housing	021 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
746-2	Housing	139 H	Old: 10/88 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
746-3	Housing	022 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
747	Housing	095 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
748-1	Housing	023 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
748-2	Housing	096 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
748-3	Housing	024 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
748-4	Housing	025 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
749	Housing	129 H	Old: 12/79 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
750-1	Housing	140 H	Old: 11/88 Rmv: 12/93	1000	No. 2 fuel oil	Removed		49

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Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
750-2	Housing	097 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
751-1	Housing	098 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
751-2	Housing	099 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
752-1	Housing	100 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
752-2	Housing	101 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
753-1	Housing	150 H	Old: 8/89 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
753-2	Housing	102 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
754-2	Housing	103 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
754-1	Housing	026 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
754-3	Housing	027 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
754-1	Housing	028 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49

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**Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
755-1	Housing	029 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
755-2	Housing	030 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
755-3	Housing	104 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
755-4	Housing	031 N	Old: NA Rmv: 12/93	275	No. 2 fuel oil	Removed		49
756	Housing	105 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
757	Housing	106 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
758	Housing	107 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
759	Housing	108 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
760	Housing	109 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
761	Housing	110 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
762	Housing	111 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49

xxx A = Administration area tank
 xxx G = Maryland National Guard Armory (MNGA)
 xxx H = Housing tank, regulated
 xxx N = Housing tank, Not regulated
 xxx P = Position Quarters tank, Not regulated
 R xxx = Tank has been replaced
 U xxx = Tank upgraded to 1988 requirements
 X xxx = Tank has been removed
 FRP = Fiber Glass Reinforced Plastic
 NA = Information Not Available
 Rmv: = Date tank was removed
 Abnd: = Date tank was abandoned

Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
763	Housing	112 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
764	Housing	113 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
765	Housing	141 H	Old: 7/88 Rmv: 12/93	1000	No. 2 fuel oil	Removed		49
766	Housing	114 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
767	Housing	115 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
768	Housing	135 H	Old: 1984 Rmv: 12/93	550	No. 2 fuel oil	Removed		49
769	Housing	116 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
770	Housing	142 H	Old: 3/88 Rmv: 12/93	1000	No. 2 fuel oil	Removed		49
771	Housing	117 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
772	Housing	118 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
773	Housing	119 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49

xxx A = Administration area tank
 xxx G = Maryland National Guard Armory (MNGA)
 xxx H = Housing tank, regulated
 xxx N = Housing tank, Not regulated
 xxx P = Position Quarters tank, Not regulated
 R xxx = Tank has been replaced
 U xxx = Tank upgraded to 1988 requirements
 X xxx = Tank has been removed
 FRP = Fiber Glass Reinforced Plastic
 NA = Information Not Available
 Rmv: = Date tank was removed
 Abnd: = Date tank was abandoned

Table D-1. (continued)
Underground Storage Tank Inventory
Fort Ritchie Army Garrison

Tank Location		Tank Number	Year Installed	Capacity (gal) Tank material	Substance Stored	Status	Remarks	Source App. A
Bldg No.	Bldg Usage							
775	Housing	120 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
777	Housing	121 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
779	Housing	122 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
781	Housing	123 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
783	Housing	124 H	Old: NA Rmv: 12/93	550	No. 2 fuel oil	Removed		49
785	Housing	151 H	Old: 1/89 Rmv: 12/93	550	No. 2 fuel oil	Removed		49

xxx A = Administration area tank
xxx G = Maryland National Guard Armory (MNGA)
xxx H = Housing tank, regulated
xxx N = Housing tank, Not regulated
xxx P = Position Quarters tank, Not regulated
R xxx = Tank has been replaced
U xxx = Tank upgraded to 1988 requirements
X xxx = Tank has been removed
FRP = Fiber Glass Reinforced Plastic
NA = Information Not Available
Rmv: = Date tank was removed
Abnd: = Date tank was abandoned

**Table D-2.
Above-ground Storage Tank Inventory
Fort Ritchie Army Garrison**

Tank No.	B-No.	Location	Year Installed	Capacity gal/ Tank material	Substance stored	Status	Remarks	Source App. A
X 003 A	101	Exchange Main Retail Store	Old: <1965 Rmv: 12/93	275	No. 2 fuel oil	Removed	Tank is an unregulated above ground heating tank in basement.	13,19,49, 55
	401	Auto Craft Shop	1993	550	waste oil	Existing		55
	401	Auto Craft Shop	1993	275	waste antifreeze	Existing		55
X 028 A	502	Old Fire Station	Old: <1965 Rmv: 1986	40	gasoline	Removed	Tank is an unregulated 40 gallon tank. Building was demolished in FY94.	49
	604			275		Removed	Tank was filled with sand in the late 1940's or early 1950's.	
	900	DPW Maintenance	1985	500	diesel	Existing	Skid mount.	13,19,55
	900	DPW Maintenance	1985	500	gasoline	Existing	Skid mount.	13,19,55

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Table E.
Summary of Natural and Cultural Resources
Fort Ritchie Army Garrison

Resource	Investigating Agency	Status of Investigation	Summary of Findings	Source App A
Vegetation	Center for Ecological Management of Military Lands (CEMML) - Floristics Laboratory	Field surveys began in the summer of 1993 and will be completed in the summer of 1995. Final report of findings will be available in January, 1996.	Preliminary report of findings submitted in June, 1994 identified 386 species of vascular plants on the installation. A total of 929 specimens had been collected for identification and preservation at the time of this report. Of the species identified at Fort Ritchie, four federally-listed Category 2 species of special concern were identified. These are wavy waterlily (<i>Najas flexilis</i>), cypress panicgrass (<i>Dichanthelium boscii</i>), one-flower indian-pipe (<i>Monotropa uniflora</i>), and red columbine (<i>Aquilegia canadensis</i>).	1,34
Wildlife	Shippensburg University Vertebrate Museum	Field surveys of birds, mammals, amphibians, and reptiles were conducted from May through October, 1994. Final report was submitted in the summer of 1995.	<p>Sixty three (63) species of birds were documented at Fort Ritchie. Of these, 18 species are neotropical migrants, which winter in Central and South America and breed in the United States. No federally- or state-listed threatened or endangered bird species were observed on the installation.</p> <p>Nine (9) mammal species were documented on the installation. One mammal species of the nine that were captured, the smoky shrew (<i>Sorex fumeus</i>), is listed as threatened in Maryland.</p> <p>Nine (9) species of amphibians were documented at the installation. No federally- or state-listed threatened or endangered amphibian species were observed.</p> <p>Nine (9) species of reptiles were documented on the installation. No federally- or state-listed threatened or endangered reptile species were observed.</p>	29,34

Table E. (continued)
Summary of Natural and Cultural Resources at
Fort Ritchie Army Garrison

Resource	Investigating Agency	Status of Investigation	Summary of Findings	Source App A
Wetlands	Dewberry & Davis	Jurisdictional wetland delineation field surveys completed in April, 1992. Final report submitted in July, 1992.	Jurisdictional wetlands and waters of the United States were identified at several locations at Fort Ritchie. Lake Royer and the Lake Wastler are classified as waters of the United States. A central stream that flows from the southwest into these lakes, forested areas at the headwaters of the central stream, and small areas associated with groundwater seeps on the slopes of the western half of the installation are classified as jurisdictional wetlands.	8,34
Rare, Threatened, and Endangered Species	CEMML, Shippensburg University Vertebrate Museum	See vascular plant and vertebrate surveys above.	Four federally-listed Category 2 species of special concern were identified. These are wavy waterlily (<i>Najas flexilis</i>), cypress panicgrass (<i>Dichanthelium boscii</i>), one-flower indian-pipe (<i>Monotropa uniflora</i>), and red columbine (<i>Aquilegia canadensis</i>). The smoky shrew (<i>Sorex fumeus</i>), listed as threatened in Maryland, was documented at the installation. Potential habitat exists for the Allegheny woodrat (<i>Neotoma magister</i>), which is a candidate for listing under the Endangered Species Act.	1,29,34

Table E. (continued)
Summary of Natural and Cultural Resources at
Fort Ritchie Army Garrison

Resource	Investigating Agency	Status of Investigation	Summary of Findings	Source App A
Cultural Resources	Dames & Moore	Review of existing historical documents, architectural surveys, application of archeological resource sensitivity model, and preparation of final report were completed in August, 1995.	<p>Two archeological sites have been identified in the vicinity of Lake Royer. It has been determined that these sites are of no significance. No additional archeological sites are expected to be found on the installation.</p> <p>There were 127 historic properties identified on the installation. Of these, 111 are within the bounds of a designated historic district. This district was designed to account for structures and sites associated with the history of development of the installation from 1926 to 1945. Application for inclusion on the National Historic Register has been recommended for the historic district. The 16 historic sites not contained within the historic district were evaluated for possible application to the Register. However, these 16 sites were not found to be eligible.</p>	2,34

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**Table F-1. Asbestos Survey
Fort Ritchie Army Garrison**

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
1	Access facility, Front Gate	1969	N	Tested on 10/21/91. Asbestos not found.	7
2	Auditorium theater	1943	Y	Tested on 11/7/89. Asbestos found in thermal system insulation materials in straight pipe and pipe joint at the entrance and the mechanical room; brown vinyl floor tile; flexible duct connectors; transite board walls and ceiling in the theater; flexible duct connector in the boiler room. Asbestos assumed present in exterior transite siding under the aluminum siding.	7
3	Physical Fitness Center	1943	Y	Tested on 7/3/91. Asbestos found in thermal system insulation materials in straight pipe, pipe joint and tank insulations in the boiler room, debris under the tank in the boiler room.	7
4	Officer Family Housing	1920	Y	Tested on 7/4/88. Asbestos found in thermal system insulation in straight pipe and pipe joint in boiler room; vinyl floor tile; plaster walls and ceiling.	7
5	Golf Course Maintenance	1961	Y	Tested on 12/5/91. Asbestos found in brown vinyl floor sheet in the bathrooms. Asbestos assumed present in transite duct covering in the boiler room.	7
6	Access facility, Side Gate	1988	N(P)	Assume asbestos not present; Built after 1980.	
11	Lakeside Club	1933	Y	Tested on 10/16/91. Asbestos found in thermal system insulation in straight pipe and pipe joint in the basement; red and beige vinyl floor tiles in the basement; grey & black and green & grey vinyl floor tiles on the second floor; and in the brown vinyl floor sheet at the bar on the first floor, transite board in the basement. Asbestos assumed present in flexible duct connector in the laundry room, and fire door on the first floor.	7
12	Pier out of Lakeside Club	NA	Y(P)	Assume presence of asbestos when information not available.	
13	Pavilion by Playground	NA	Y(P)	Assume presence of asbestos when information not available.	
85	One story wood structure	1971	N	Tested in 12/91. Asbestos not found.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
100	Front gate admin area. Pending demo FY94. UP as of 8/95.	1943	Y	Tested on 11/7/89. Asbestos found in thermal system insulation in straight pipe in supply store and beauty shop; brown, green and black vinyl floor tiles; interior transite board; exterior transite siding; built-up roof samples. Assumed present in straight pipe insulation in basement and roof.	7
101	Front Gate Admin Area	1934	Y	Tested on 10/21/91. Asbestos found in brown vinyl floor tile and transite board ceiling.	7
102	Community Center	1933	Y	Tested on 11/15/89. Asbestos found in brown and green vinyl floor tile; roof flashing material.	7
104	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown floor tile located throughout the building.	7
105	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown floor tile located throughout the building.	7
106	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown floor tile located throughout the building.	7
107	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in light brown and white vinyl floor tile.	7
108	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in thermal system insulation materials in straight pipe and pipe joint located above the drop ceiling in the bathrooms; light brown and white vinyl floor tile.	7
109	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in light brown vinyl floor tile.	7
110	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown vinyl floor tile.	7
111	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown vinyl floor tile.	7
112	Front Gate Admin Area	1934	Y(P)	Tested on 10/9/91. Assumed present in vinyl floor tile	7
113	Heat Pl Bldg	1966	Y	Tested on 10/20/91. Asbestos found in thermal system insulation in pipe joint and transite board ceiling.	7
114	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown vinyl floor tile	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
115	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown vinyl floor tile	7
116	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown vinyl floor tile under the carpet.	7
117	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in light brown vinyl floor tile	7
118	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in thermal system insulation in straight pipe and pipe joint; brown and white vinyl floor tiles.	7
119	Front Gate Admin Area	1934	Y(P)	Tested on 10/23/91. Assumed present in brown vinyl floor tile under carpet.	7
120	Front Gate Admin Area	1934	Y(P)	Tested on 10/23/91. Assumed present in brown vinyl floor tile under carpet.	7
121	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown and tan vinyl floor tiles.	7
122	Front Gate Admin Area	1934	Y	Tested on 10/23/91. Asbestos found in brown vinyl floor tile.	7
123	Provost Marshal	1934	Y	Tested on 10/23/91. Asbestos found in brown and tan vinyl floor tiles.	7
124	Front Gate Admin Area	1934	Y	Tested on 11/29/89. Asbestos found in brown vinyl floor tile; transite board ceiling, siding and exterior board panels; tar paper. Assumed present in transite duct.	7
125	44271, Front Gate Admin Area, demolished FY92	1943	Y	Tested on 10/16/91. Asbestos found in thermal system insulation in tank, duct, stack breeching in boiler room; brown vinyl floor tile; interior transite board; exterior transite siding. Assumed present in transite duct on both floors; transite debris in crawl space; flue gasket on adjacent chimney.	7
126	44271, Front Gate Admin Area, demolished FY92	1943	Y	Tested on 10/17/91. Asbestos found in thermal system insulation in the boiler tank, duct, hot water tank, and insulation debris in the boiler room; brown vinyl floor tile; interior transite board, exterior transite siding, and transite debris in the crawl space. An exhaust gasket outside of the boiler room.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
127	44270, Front Gate Admin Area, demolished FY92	1943	Y	Tested on 10/17/91. Asbestos found in thermal system insulation in tank, duct, straight pipe in the boiler room; brown vinyl floor tile; interior transite board; exterior transite siding; transite debris in crawl space; exhaust gasket outside boiler room. Assumed present in transite duct on both floors.	7
128	74074, Front Gate Admin Area, demolished FY92	1943	Y	PIH - ACBMs, which pose an immediate threat to building occupants, was found in the tank insulation and the insulation debris located in the boiler room. Asbestos found in thermal system insulation in the tank, duct, straight pipe, and debris in the boiler room; brown vinyl floor tile; interior transite board, exterior transite siding, and transite debris in the crawl space; exhaust gasket outside of the boiler room. Assumed present in transite duct on both floors.	7
129	44270, Front Gate Admin Area, demolished FY92	1943	Y	Tested on 10/17/91. Asbestos found in thermal system insulation in duct and tank in boiler room; brown vinyl floor tile; interior transite board; exterior transite siding; transite debris in crawl space; gasket outside. Assumed present in transite duct on both floors.	7
130	Front Gate Admin Area	1934	Y(P)	Tested on 11/5/91. Assumed present in transite board over old door.	7
131	Front Gate Admin Area	1943	Y	Tested on 11/6/91. Asbestos found in thermal system insulation in pipe joint and tank in boiler room; brown vinyl floor tile in stairwell; transite board in electrical room, boiler room and exterior. Assumed present in flue gasket on adjacent chimney.	7
132	Front Gate Admin Area, pending demo FY94. UP as of 8/95	1943	Y	Tested on 11/20/89. Asbestos found in thermal system insulation in tank, duct, and stack breeching in boiler room; brown vinyl floor tile; transite duct covering; transite board walls & ceiling; exterior transite siding and debris; flexible duct connector in boiler room. Assumed present in flue gasket on adjacent chimney.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
133	Front Gate Admin Area	1943	Y	Tested on 11/20/89. Asbestos found in thermal system insulation in duct and stack breeching; yellow vinyl floor tile; exterior transite board; debris in boiler room and crawl space. Assumed present in flue gasket on adjacent chimney.	7
134	Front Gate Admin Area	1943	Y	Tested on 11/20/89. Asbestos found in thermal system insulation in duct, patching material between seams of transite wall panels; transite board, insulation surrounding the hatch in boiler room; yellow vinyl floor sheet; exterior transite board under aluminum siding; transite board debris in crawl space. Assumed present in flue gasket on adjacent chimney.	7
135	Front Gate Admin Area, demolished FY94	1943	Y	Tested on 10/17/91. Asbestos found in thermal system insulation in duct and tank in boiler room; brown vinyl floor tile; interior transiteboard; exterior transite siding; gasket outside. Assumed present in transite duct on both floors; transite debris in crawl space.	7
136	USAISEC-CONUS Admin	1943	Y	Tested on 12/5/91. Asbestos found in beige vinyl floor tile; transite board in boiler room; debris on exhaust flue in boiler room. Assumed present in transite duct and siding.	7
137	USAISEC-CONUS Admin	1943	Y	Tested on 12/5/91. Asbestos found in transite board in boiler room. Assumed present in transite duct and siding; flue gasket on adjacent chimney.	7
138	USAISEC-CONUS Admin	1943	Y	Tested on 12/5/91. Asbestos found in white vinyl floor tile and light fixture paper; tar wrap and gypsum in boiler room. Assumed present in transite ducts; exterior transite siding; flue gasket on adjacent chimney.	7
139	Front Gate Admin Area	1943	Y	Tested on 12/5/91. Asbestos found in thermal system insulation in duct in boiler room; brown vinyl floor tile; interior transite board; exterior transite siding. Assumed present in transite ducts on both floors; flue gasket on adjacent chimney.	7
140	61090, Front Gate Admin Area	1943	Y	Tested on 7/18/88. Asbestos found in thermal system insulation in straight pipe and pipe joint above drop ceiling tiles in hallway.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
141	Electrical Maintenance	1934	Y	Tested on 11/30/89. Asbestos found in brown vinyl floor tile.	7
143	USAISEC-CONUS Admin	1943	Y	Tested on 11/5/91. Asbestos found in tan vinyl floor tile; transite board in boiler room. Assumed present in exterior transite siding; flue gasket on adjacent chimney.	7
144	Front Gate Admin Area, demolished FY94	1943	Y	Tested on 10/17/91. Asbestos found in thermal system insulation in straight pipe and duct in boiler room; interior transite board; exterior transite siding. Assumed present in transite ducts on both floors; transite debris in crawl space.	7
147	Finance Admin	1943	Y	Tested on 7/19/88. Asbestos found in thermal system insulation in duct and transite board in boiler room. Assumed present in exterior transite siding; transite debris in crawl space; flue gasket at adjacent chimney.	7
148	Office of Acquisition	1943	Y	Tested on 11/16/89. Asbestos found in thermal system insulation in stack and transite board in boiler room; Tan vinyl floor tile; exterior transite board under aluminum siding. Assumed present in transite debris in crawl space; flue gasket on adjacent chimney.	7
149	Finance admin building	1943	Y	Tested in 11/30/89. Asbestos found in interior transite board in boiler room; exterior transite board under aluminum siding; debris in boiler room and crawl space. Assumed present in rope insulation between ducts and walls; flue gasket on adjacent chimney.	7
150	Drug/alcohol abuse center	1934	Y	Tested on 11/16/89. Asbestos found in brown vinyl floor tile; transite board in boiler room.	7
151	Finance Admin	1957	Y	Tested on 12/9/91. Asbestos found in transite board in boiler room, rolled roofing above front entrance. Assumed present in fire door in boiler room.	7
152	Scientific Operations Bldg	1988	Y(P)	Tested on 12/17/91. Assumed present in all fire doors.	7
154	Credit Union	1934	Y	Tested on 11/6/91. Asbestos found in transite board above ceiling in bathroom; tar paper under asphalt shingle.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
155	Family housing, SE	1914	Y	Tested on 7/12/88. Asbestos found in thermal system insulation in straight pipes in bathroom; exterior siding.	7
156	Detached garages, SE	1960	Y(P)	Assume presence of asbestos; Built before 1980.	
160	Data Processing & Telecom	1934	Y	Tested on 11/17/89. Asbestos found in thermal system insulation in stack breeching in boiler room; white and brown vinyl floor tiles; transite board in communications area, boiler room, and exterior.	7
161	Storage, SE	1933	N	Tested on 11/15/91. Asbestos not found.	7
162	Generator Building	NA	Y(P)	Assume presence of asbestos when information not available.	
200	Post HQ, SE admin area	1933	Y	Tested on 7/13/88. Asbestos found in thermal system insulation in straight pipe, pipe joint and rope insulation in boiler room; dark brown vinyl floor tile in hallway; transite board in storage area.	7
201	SE Admin Area	1933	Y	Tested on 11/22/89. Asbestos found in brown and green vinyl floor tile.	7
202	Main Library, SE admin area	1933	Y	Tested on 11/5/91. Asbestos found in brown streak vinyl floor tile; transite board in basement; tar wrap on second floor	7
203	Post HQ --> SE admin area	1942	Y	Tested on 11/29/89. Asbestos found in exterior transite board under aluminum siding.	7
204	SE Admin Area	1933	N	Tested on 11/5/91. Asbestos not found.	7
205	SE Admin Area	1934	Y	Tested on 11/5/91. Asbestos found in white and beige vinyl floor tile; exterior transite siding.	7
206	Storage	1934	Y	Tested on 11/15/91. Asbestos found in wall particle board.	7
210	Flag pole	NA	Y(P)	Assume presence of asbestos when information not available.	
301	Photo Lab, SE	1934	Y	Tested on 7/11/88. Asbestos found in thermal system insulation in straight pipe, pipe joint, tank, and debris in boiler room; straight pipe insulation in office; transite board and varied hole acoustical ceiling tile in the basement.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
302	Post Chapel. SE	1943	Y	Tested on 11/6/91. Asbestos found in white vinyl floor tile in bath; insulation debris in crawl space; transite wallboard in boiler room.	7
303	SE Admin Area	1953	Y	Tested on 7/12/88 by EMS. Asbestos found in thermal system insulation in duct, pipe joint and debris in boiler room; straight pipe insulation in storage are and crawl space; brown vinyl floor tile in hallway; transite board in office; flexible duct connector in boiler room.	7
304	Religious Education Facility	1993	N(P)	Assume asbestos not present; Built after 1980.	
305	SE Admin Area	1934	Y	Tested on 10/29/91. PIH - ACBMs, which pose an immediate threat to building occupants, was found in straight pipe insulation above the drop ceiling in the office area. Asbestos found in thermal system insulation in straight pipe above the drop ceiling; white vinyl tile in the bathrooms.	7
306	SE Admin Area	1934	Y	Tested on 11/22/89. Asbestos found in thermal system insulation in exterior duct on air handler unit; interior transite board; exterior transite siding.	7
307	SE Admin Area	1934	Y	Tested on 11/22/89. Asbestos found in interior transite board; exterior transite siding.	7
308	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in thermal system insulation in straight pipe and pipe joint above drop ceiling in bathroom; Green and white vinyl floor tile.	7
309	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in white vinyl floor tile.	7
310	SE Admin Area	1934	Y(P)	Tested on 5/18/92. Asbestos assumed present in vinyl floor tile under carpet.	7
311	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7
312	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
313	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in thermal system insulation in straight pipe and pipe joint above ceiling in boiler room; Green vinyl floor tile; transite board in boiler room.	7
314	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7
315	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile under the carpet.	7
316	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile under the carpet.	7
317	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos on green vinyl floor tile.	7
318	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in thermal system insulation in straight pipe and pipe joint above drop ceiling in bathroom; Green and white vinyl floor tile.	7
319	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7
320	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7
321	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7
322	SE Admin Area	1934	Y	Tested on 10/31/91. Asbestos found in green vinyl floor tile.	7
323	SE Admin Area. pending demo FY94, UP as of 8/95	1943	Y	Tested on 10/18/91 / 2/4/92. Asbestos found in thermal system insulation in tank, duct, and pipe joint in the boiler room; Beige vinyl floor tile in the bathroom; Light fixture paper in a work area on the first floor; transite board in the hallway and stairwell; gasket in the boiler room; Gypsum board (joint compound) ceiling in a closet. Assumed present in transite duct in hallway of both floors; exterior transite siding under the aluminum siding; transite debris in the crawl space.	7
324	Enlisted Barracks, SE	1943	Y	Tested in 7/21/88. Asbestos found in transite board in boiler room. Assumed present in exterior transite siding; Siding debris in crawl space; flue gasket on adjacent chimney.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
325	Senior enlisted quarters, SE admin area. pending demo FY94, UP as of 8/95	1943	Y	Tested in 7/21/88 by EMS. Asbestos found in thermal system insulation in duct, straight pipe in boiler room; transite board; brown vinyl floor tile in storage area; flexible duct connectors in boiler room. Assumed present in exterior transite siding; transite debris in crawl space; flue gasket on adjacent chimney.	7
326	Museum, SE Admin Area	1933	Y	Tested on 12/5/91. Asbestos found in brown vinyl tile in office and stairwell.	7
327	Access Facility, SE	1955	Y	Tested on 11/13/89. Asbestos found in transite board walls and ceiling in boiler room.	7
329	73055, SE Admin Area	1974	Y(P)	Assume presence of asbestos; Built before 1980.	
330	SE Admin Area, Banfill Ave	1934	Y	Tested on 11/13/89. Asbestos found in thermal system insulation in tank, pipe joint in boiler room.	7
331	61090, SE Admin Area	1943	Y	Tested on 7/20/88. Asbestos found in thermal system insulation in straight pipe and pipe joint above drop ceiling tiles in hallway; Beige and yellow vinyl floor tile in hallway; exterior siding.	7
332	Dental Clinic. SE Admin Area	1943	Y	Tested on 10/16/91. Asbestos found in brown vinyl floor tile and sheet; transite board in laboratory. Assumed present in exterior transite siding.	7
333	SE Admin Area	1943	Y	Tested on 12/6/91. Asbestos found in gasket outside boiler room. Assumed present in exterior transite siding under aluminum siding.	7
334	SE Admin Area	1943	Y	Tested on 12/6/91. Asbestos found in gasket outside boiler room. Assumed present in exterior transite siding under aluminum siding.	7
335	SE Admin Area	1943	Y	Tested on 12/6/91. Asbestos found in gasket outside boiler room. Assumed present in transite siding under aluminum siding.	7
336	Education Center	1943	Y	Tested on 11/29/89. Asbestos found in interior transite board and debris in boiler room; exterior transite board and tar paper under aluminum siding. Assumed present in transite debris in crawl space; flue gasket on adjacent chimney.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
337	Education Center	1943	Y	Tested in 11/16/89. Asbestos found in interior transite board in boiler room; exterior transite board under siding. Assumed present in transite debris in crawl space; flue gasket on adjacent chimney.	7
341	Health Clinic, SE	1964	Y	Tested in 10/21/91. Asbestos found in thermal system insulation in tank in boiler room; Tan, white, black, and grey vinyl floor tiles; roof flashing.	7
343	SE Admin Area	1934	Y	Tested in 12/9/91. Asbestos found in green vinyl tile in bathroom; brown vinyl floor tile in hallway; insulation patch in furnace room; exterior transite siding. Assumed present in interior transite board in furnace room.	7
346	Wood Skill Center, SE	1943	Y	Tested in 12/6/91. Asbestos found in thermal system insulation in tank in boiler room; transite board in boiler room; white vinyl floor tile in office; exterior transite siding under aluminum siding. Assumed present in light fixture paper; Fire doors.	7
347	Skills Development Center	1984	N	Tested on 12/5/91. Asbestos not found.	7
349	Military Personnel Admin	1943	Y	Tested on 12/16/91. Asbestos found in white vinyl tile in closet; transite board in bathroom and boiler room; Rope insulation in boiler room. Assumed present in transite siding under aluminum siding; flue gasket at adjacent chimney.	7
350	Military Personnel Admin	1943	Y	Tested on 12/6/91. Asbestos found in transite board in boiler room and electrical room. Assumed present in transite siding under aluminum siding; flue gasket at adjacent chimney.	7
351	Army family support facility. demolished FY92	1943	Y	Tested on 7/20/88. Asbestos found in thermal system insulation in stack breeching in boiler room; transite board; brown vinyl floor tile.	7
360	SE along Ritchie Rd	1934	Y	Tested on 7/27/88. Asbestos found in thermal system insulation in straight pipe above ceiling in hallway and in boiler room; Tan and brown vinyl floor tiles.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
400	SE along Ritchie Rd	1959	Y	Tested on 11/21/89. Asbestos found in thermal system insulation in tank, duct, and pipe joint and debris in boiler room; Grey and black vinyl floor tiles in basement; Built up roof sample.	7
401	Hazmat storage, Auto Skills Center, SE	1934	Y	Tested on 12/5/91. Asbestos found in exterior transite siding. Assumed present in straight pipe insulation; Acoustical ceiling tile in basement	7
402	CO HQ Bldg, SE	1964	Y	Tested on 11/15/89. Asbestos found in thermal system insulation in tank and stack breaching in boiler room; Built up roof.	7
403	CO HQ Bldg, SE	1964	Y	Tested on 10/28/91. Asbestos found in tan, brown, beige, and white vinyl floor tiles; roof flashing. Assumed present in light fixture paper; Fire doors in stairwells.	7
413	Well 1, SW Family Housing	1943	Y(P)	Assume presence of asbestos; Built before 1980.	
447	73055, SW Family Housing	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
448	73055, SW Family Housing	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
450	Family housing, SW	1958	Y	Tested on 10/91. Asbestos found in thermal system insulation in straight pipe in furnace room of unit 4.	7
451	Family housing, SW	1958	Y(P)	Tested on 11/91. Asbestos assumed present in straight pipe insulation in furnace rooms of units 3 and 6.	7
452	Family housing, SW	1958	Y	Asbestos found in thermal system insulation in straight pipes in furnace room.	7
453	Family housing, SW	1958	Y(P)	Tested on 12/91. Asbestos assumed present in straight pipe in furnace rooms.	7
454	Family housing, SW	1958	Y	Tested on 12/91. Asbestos found in thermal system insulation in straight pipe in furnace room; Grey vinyl floor tile in closet of unit 6.	7
455	Family housing, SW	1958	Y(P)	Tested on 12/91. Asbestos assumed present in straight pipe in furnace rooms.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
457	Family housing, SW	1958	Y	Tested on 10/22/91. Asbestos found in thermal system insulation in straight pipe in furnace rooms.	7
458	Family housing, SW, Unit 3	1962	Y	Tested on 12/91. Asbestos found in white vinyl floor tile. Assumed present in gaskets on furnace.	7
459	Family housing, SW, Unit 3	1962	Y	Tested on 12/91. Asbestos found in white and beige vinyl floor tile. Assumed present in gaskets and flexible duct connectors on furnace.	7
460	Family housing, SW	1962	Y	Tested on 12/91. Asbestos found in white, beige, brown, and grey vinyl floor tiles; insulation on pad under furnace; Gypsum board joint compound. Assumed present in gaskets on the furnace.	7
461	Attached shed door	1962	Y	Tested on 12/91. Asbestos found in tan vinyl floor tile. Assumed present in gaskets on furnace; insulation pads under furnace	7
462	Family housing, SW	1962	Y	Tested on 12/91. Asbestos found in white and grey vinyl floor tile. Assumed present in gaskets on furnace; insulation pad under furnace.	7
463	Family housing, SW	1962	Y	Tested on 1/92. Asbestos found in tan and grey floor tile; insulation pad under furnace. Assumed present in furnace gaskets.	7
464	Family housing, SW	1962	Y	Tested on 1/92. Asbestos found in tan vinyl floor tile. Assumed present in pad under furnace; furnace gaskets	7
465	Family housing, SW	1962	Y	Tested on 1/92. Asbestos found in tan vinyl floor tile; Joint compound in gypsum board. Assumed present in furnace gaskets; insulation pads under furnace.	7
466	Family housing, SW	1962	Y	Tested on 1/92. Asbestos found in vinyl floor tiles. Assumed present in gaskets on furnace; insulation pads under furnace	7
467	Family housing, SW	1962	Y	Tested on 1/92. Asbestos found in tan and grey vinyl floor tile. Assumed present in furnace gaskets.	7
468	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile; joint compound in gypsum board	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
469	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in transite pipe in furnace room.	7
470	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in tan vinyl floor tile.	7
471	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in transite straight pipe in furnace room.	7
472	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in tan vinyl floor tile.	7
473	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite straight pipe in furnace room.	7
474	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile.	7
475	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite straight pipe in furnace room.	7
476	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in vinyl tiles.	7
477	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
478	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
479	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
480	Family housing, SW	1964	N	Tested on 1/92. Asbestos not found.	7
481	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
482	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
483	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
484	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
485	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
486	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
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Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
487	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
488	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile; Joint compound in gypsum board.	7
489	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in tan and brown vinyl floor tile.	7
490	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
491	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos found in vinyl floor tile; Transit straight pipe in furnace.	7
492	73055, W Reckord Ave	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
493	Family housing, SW	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile.	7
494	73055, SW, Mountain Rd	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
495	Family housing, SW	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite pipe in furnace room.	7
496	73055, SW, Mountain Rd	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
497	73055, SW, Mountain Rd	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
500	S Enlisted Barracks	1964	Y	Tested on 7/27/88. Asbestos found in thermal system insulation in pipe joint, stack breeching and tank in boiler room; Vinyl floor tiles; gasket in boiler room.	7
501	S of Lake Wastler	NA	Y(P)	Assume presence of asbestos when information not available.	
502	73010, Fire Station, demolished FY94	1943	Y	Tested on 11/22/89. Asbestos found in flexible duct connector and transite board in boiler room; brown vinyl floor tile in bathroom; exterior transite board siding.	7
503	Garrison Commander	1964	Y	Tested on 11/15/89. Asbestos found in thermal system insulation in tank in boiler room.	7
504	Exchange Service Outlet	1952	N	Tested on 11/14/89.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
505	84132, demolished FY92, Well 3	1964	Y(P)	Assume presence of asbestos; Built before 1980.	
506	Childhood Developmt Center	1982	N	Tested on 11/13/89. Asbestos not present.	7
507/508	44220, Warehouse. demolished FY94\74021, Commissary, demolished FY94	1943	Y	Tested on 11/14/89. Asbestos found in thermal system insulation in straight pipe in boiler room; Grey, white, and brown vinyl floor tiles; transite board under aluminum siding; Built up roof samples.	7
509	Bowling Center	1983	N	Tested on 10/28/91. Asbestos not present.	7
510	Childhood Developmt Center	1991	N(P)	Assume asbestos not present; Built after 1980.	
511	Fast food/ Snack bar	1977	Y(P)	Assume presence of asbestos; Built before 1980.	
512	Tennis Court	NA	Y(P)	Assume presence of asbestos when information not available.	
514	Septic, Toilet/Shower	1974	Y(P)	Assume presence of asbestos; Built before 1980.	
515	Auto Service Station	1973	Y	Tested on 10/29/91. Asbestos found in built up roof material.	
517	Main store	1992	N(P)	Assume asbestos not present; Built after 1980.	
518	Commissary	1994	N(P)	Assume asbestos not present; Built after 1980.	
519	Fire Station	1994	N(P)	Assume asbestos not present; Built after 1980.	
520	Guest House, SW Housing	1973	Y	Tested on 11/11/89. Asbestos found in thermal system insulation in tank and pipe joint. Assumed present in vinyl floor tiles.	7
521	Youth Activity Center, West	1983	N	Tested on 11/89. Asbestos not found.	7
601	DEH Facility	1953	Y	Tested on 7/13/88. Asbestos found in thermal system insulation in straight pipes in shop area; Floor covering in bathroom; debris in storage.	7
602	DEH Facility	1933	Y	Tested on 7/12/88. Asbestos found in thermal system insulation in straight pipe and pipe joint in storage area.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
603	DEH Facility	1953	Y	Tested on 8/31/88. Asbestos found in thermal system insulation in straight pipe and pipe joint; Green, blue, and brown vinyl floor tiles; Wall transite board in hallway; debris in storage area; exterior siding; gasket in boiler room.	7
604	Flight control tower. demolished, FY94	1956	Y	Tested on 11/14/91. Asbestos found in red vinyl floor tile	7
	Substation. Next to B-604	NA	Y(P)	Assume presence of asbestos when information not available.	
	Baltimore COE Trailer	NA	Y(P)	Assume presence of asbestos when information not available.	
605	DEH Facility	1952	Y	Tested on 7/19/88. Asbestos found in exterior siding.	7
606	General Admin	1986	N	Tested on 11/14/91. Asbestos not found.	7
607	SE of Lake Wastler	1990	N(P)	Assume asbestos not present; Built after 1980.	
700	Motor Pool	1952	Y	Tested on 11/16/89. Asbestos found in green vinyl floor tile in break room; interior transite board in paint shop; exterior transite board at boiler room entrance; Built up roof samples.	7
701	Motor Pool. demolished FY94	1975	N	Tested on 11/14/91. Asbestos not found.	7
709	73055, W Housing Area	1971	Y(P)	Assume presence of asbestos; Built before 1980.	
710	Officer family housing, West	1952	Y	Tested on 7/21/88. Asbestos found in thermal system insulation in straight pipe and pipe joint in storage area; transite board in boiler room; debris in storage room.	7
711	Detached garages, West	1952	Y(P)	Assume presence of asbestos; Built before 1980.	
712	Tennis court, W Housing Area	NA	Y(P)	Assume presence of asbestos when information not available.	
713	Motor Pool: op. & dispatch	1972	N	Tested on 11/13/91. Asbestos not found.	7
716	EEO Office	1952	Y	Tested on 11/13/91. Asbestos found in beige floor tile	7

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Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
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Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
718	West Shore of Lake Wastler	NA	Y(P)	Assume presence of asbestos when information not available.	
720	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in joint compound within gypsum board. Assumed present in transite pipe in foyer.	7
721	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in transite straight pipe in furnace rooms.	7
722	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in transite straight pipe in furnace rooms.	7
723	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in transite straight pipe in furnace rooms.	7
724	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in tan vinyl floor tile in foyer. Assumed present in gaskets on furnace unit.	7
725	Family housing, West	1964	Y(P)	Assume presence of asbestos; Built before 1980.	
726	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in green and tan vinyl floor tile in foyer.	7
727	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile.	7
728	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in grey and tan vinyl floor tile.	7
729	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in tan floor tile; Joint compound in ceiling gypsum board.	7
730	Family housing, West	1964	Y(P)	Assume presence of asbestos; Built before 1980.	
731	W Housing Area	NA	Y(P)	Assume presence of asbestos when information not available.	
732	44262, W DEH Maint & Eqp	1964	Y	Tested on 11/13/91. Asbestos found in exterior transite board	7
733	44262, W DEH Maint & Eqp	1968	N	Tested on 11/11/91. Asbestos not found.	7
734	West DEH Maint & Eqp	1974	Y	Tested on 11/13/91. Asbestos found in transite board in storage room; white vinyl floor tile	7
735	44222, W DEH Maint & Eqp	1975	Y(P)	Assume presence of asbestos; Built before 1980.	

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
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Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
736	West DEH Maint & Eqp	1975	Y	Tested on 11/13/91. Asbestos found in orange/brown vinyl floor sheet in front office; Rolled roofing material.	7
742	73055, W Housing Area	1976	Y(P)	Assume presence of asbestos; Built before 1980.	
743	Detached garages, no map	1969	Y(P)	Assume presence of asbestos; Built before 1980.	
745	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile in foyers.	7
746	Family housing, West	1962	Y	Tested on 1/92. Asbestos found in white and tan vinyl floor tile	7
747	Family housing, West	1964	N	Tested on 1/92. Asbestos not found.	7
748	Family housing, West	1962	Y	Tested on 1/92. Asbestos found in beige vinyl floor tile; Joint compound in gypsum board. Assumed present in flexible duct connectors in furnace rooms	7
749	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in tan vinyl floor tile in foyer; tar wrap in unit 1 closet.	7
750	Family housing, West	1958	Y(P)	Asbestos assumed present in straight pipe insulation in furnace rooms.	7
751	Family housing, West	1958	N	Tested on 1/92. Asbestos not found.	7
752	Family housing, West	1958	Y(P)	Tested on 1/92. Asbestos assumed present in straight pipe insulation in furnace rooms.	7
753	Family housing, West	1958	Y(P)	Tested on 1/92. Asbestos assumed present in straight pipe insulation in furnace rooms.	7
754	Family housing, West	1962	Y	Tested on 1/92. Asbestos found in tan floor tile. Assumed present in straight pipe insulation in furnace rooms.	7
755	Family housing, West	1962	Y	Tested on 1/92. Asbestos found in white vinyl floor tile. Assumed present in straight pipe insulation in furnace rooms.	7
756	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in transite straight pipe in furnace room.	7
757	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in tar wrap in closet.	7
758	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in transite straight pipe insulation in furnace rooms.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
759	Family housing, West	1964	Y(P)	Assume presence of asbestos; Built before 1980.	
760	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in joint compound in gypsum board.	7
761	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile in closet.	7
762	Family housing, West	1964	N	Tested on 1/92. Asbestos not found.	7
763	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile in foyer.	7
764	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
765	Family housing, West	1964	Y	Asbestos found in tar wrap; beige and white/green vinyl floor tile	7
766	Family housing, West	1964	P	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
767	Family housing, West	1964	N	Tested on 1/92. Asbestos not found.	7
768	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
769	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white and beige vinyl floor tile.	7
770	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white/green and tan vinyl floor tiles in foyers. Assumed present in gaskets on furnace unit.	7
771	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white vinyl tile.	7
772	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in beige vinyl floor tile; tar wrap. Assumed present in gaskets on furnace unit.	7
773	Family housing, West	1964	Y	Tested on 1/92. Asbestos found in white vinyl floor tile.	7
775	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
776	73055, West, Cushman Ave	1974	Y(P)	Assume presence of asbestos; Built before 1980.	
777	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7

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Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
778	73055, West, Catoclin Circle	1974	Y(P)	Assume presence of asbestos; Built before 1980.	
779	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
781	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
783	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
785	Family housing, West	1964	Y(P)	Tested on 1/92. Asbestos assumed present in gaskets on furnace unit.	7
800	UOQ Military\Transient	1965	Y(P)	Assume presence of asbestos; Built before 1980.	
809	Detached garages, NW Area	1962	Y(P)	Assume presence of asbestos; Built before 1980.	
811	Cols Officers Quarters	1942	Y	Tested on 7/18/88. Asbestos found in thermal system insulation in straight pipe and pipe joint in hallway; roofing material.	7
825	Boat House, Lake Royer	1943	Y	Tested on 11/14/91. Asbestos found in thermal system insulation in straight pipe and pipe joint; interior transite wall; exterior transite siding.	7
828	74067, Storage. demolished FY92	1943	Y(P)	Assume presence of asbestos; Built before 1980.	
829	74078, Thrift shop. demolished FY92	1943	Y	Tested on 10/24/91. Asbestos found in thermal system insulation in tank; Patching material in boiler room; brown vinyl floor tile; exterior transite siding. Assumed present in transite debris in crawl space.	7
831	76010, Museum. demolished FY92	1943	Y	Tested on 11/30/89. Asbestos found in interior transite board in furnace room; exterior transite siding.	7
832	N shore of Lake	NA	Y(P)	Assume presence of asbestos when information not available.	
833	44220, Warehouse. demolished FY92	1943	Y	Tested on 10/24/91. Asbestos found in thermal system insulation in straight pipe and pipe joint; exterior transite siding.	7

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
834	Outdoor Recreation Center	1943	Y	Tested on 11/29/89. Asbestos found in thermal system insulation in straight pipe and pipe joint in furnace room; exterior transite siding.	7
835	Water treatment building	1968	Y	Tested on 12/10/91. Asbestos found in thermal system insulation in pipe joint; roof flashing; Rolled roofing materials.	7
836	Filter plant, swimming pool	1975	Y(P)	Assume presence of asbestos; Built before 1980.	
837	Warehouse, NW Area	1975	Y	Tested on 12/10/91. Asbestos found in tan and white vinyl floor tile.	7
838	ACES facility, North of Lake Wastler	1974	Y(P)	Assume presence of asbestos; Built before 1980.	
839	Storage, not on 1990 map	1993	N(P)	Assume asbestos not present; Built after 1980.	
860	Family housing, NW	1960	Y(P)	Assume presence of asbestos; Built before 1980.	
907	Refuse\Garbage Bldg	1952	N	Tested on 10/91. Asbestos not found.	7
908	Refuse\Garbage Bldg	1952	Y	Tested on 12/10/91. Asbestos found in wall and ceiling transite board and siding. Assumed present in flexible duct connectors.	7
909	Storage, N border	1943	Y	Tested on 12/10/91. Asbestos found in transite siding; Rolled roofing.	7
930	Sewage pump station	1982	N(P)	Assume asbestos not present; Built after 1980.	
1000	300,000-gal Post Reservoir, SE	1952	Y(P)	Assume presence of asbestos; Built before 1980.	
1001	Well 4, NW by WWTP	1952	Y(P)	Assume presence of asbestos; Built before 1980.	
1002	Well 5, N, across Rt 550	1952	Y(P)	Assume presence of asbestos; Built before 1980.	
1003	Well 6, N, across Rt 550	1952	Y(P)	Assume presence of asbestos; Built before 1980.	
1004	Well 7, N, across Rt 550	1952	Y(P)	Assume presence of asbestos; Built before 1980.	
1005	Well 8, N, across Rt 550	1952	Y(P)	Assume presence of asbestos; Built before 1980.	

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

Table F-1. Asbestos Survey (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
1006	1,000,000 gallon Post Reservoir SW	1953	Y(P)	Assume presence of asbestos; Built before 1980.	
1009	44222, W on Range Rd	1978	Y(P)	Assume presence of asbestos; Built before 1980.	
1010	1,000,000 gal SW	1953	Y(P)	Assume presence of asbestos; Built before 1980.	
1011	Chlorinator bldg	1953	Y(P)	Assume presence of asbestos; Built before 1980.	
1012	Water treatment	1943	Y(P)	Assume presence of asbestos; Built before 1980.	
1013	Water well & pump	1992	N(P)	Assume asbestos not present; Built after 1980.	
1025	ARNG/ASSURE Center	1993	N(P)	Assume asbestos not present; Built after 1980.	

Y = Asbestos was identified.
Y(P) = There is reason to assume that asbestos is present.
N(P) = There is reason to assume that asbestos is not present.
N = Asbestos was tested for and not identified.

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**Table F-2. Summary of Lead Based Paint
Fort Ritchie Army Garrison**

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
1	Access facility, Front Gate	1969	Y(P)	Assume presence of LBP; built before 1978.	
2	Auditorium theater	1943	Y(P)	Assume presence of LBP; built before 1978.	
3	Physical Fitness Center	1943	Y(P)	Assume presence of LBP; built before 1978.	
4	Officer Family Housing	1920	Y	Tested on 11/91. LBP in: baseboards; ceilings and trim; interior doors, jambs and trim; front entry door, jamb and trim; painted areas of stairs; interior painted pipes; radiators; shelves and supports; wainscote on walls; interior walls; window sashes, sills, trim, and wells; exterior painted surfaces.	9
5	Golf Course Maintenance	1961	Y(P)	Assume presence of LBP; built before 1978.	
6	Access facility, Side Gate	1988	N(P)	Assume LBP not present; built after 1978.	
11	Lakeside Club	1933	Y	Tested on 11/94. LBP in: roof trim; porch floor NE side; stairs; windows, frames and doors. Soil on the NE and SW sides.	27
12	Pier out of Lakeside Club	NA	Y(P)	Assume presence of LBP when information NA.	
13	Pavilion by Playground	NA	Y(P)	Assume presence of LBP when information NA.	
85	One story wood structure	1971	Y(P)	Assume presence of LBP; built before 1978.	
100	Front gate admin area. Pending demo FY94. UP as of 8/95.	1943	Y(P)	Assume presence of LBP; built before 1978.	
101	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
102	Community Center	1933	Y(P)	Assume presence of LBP; built before 1978.	
104	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
105	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
106	Front gate admin area	1934	N	Tested negative on 6/93 before renovation.	27
107	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
108	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
109	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
110	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
111	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
112	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
113	Heat PI Bldg	1966	Y	Tested on 11/94. LBP in: roof trim.	27
114	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
115	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
116	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
117	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
118	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
119	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
120	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
121	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
122	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
123	Provost Marshal	1934	N	Tested on 11/94. LBP in: Metal handrail; Wood trim; Soil on the north and south sides. 7/95 Lead paint removal/abatement.	27
124	Front gate admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
125	44271, Front gate admin area, demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
126	44271, Front gate admin area, demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
127	44270, Front gate admin area, demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
128	74074, Front gate admin area, demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
129	44270, Front gate admin area, demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
130	Front gate admin area	1934	Y	Tested on 11/94. LBP in: Wood trim. Soil on the north and east sides.	27
131	Front gate admin area	1943	Y	Tested on 11/94. LBP in: windows. Soil on the east, south, and west sides.	27
132	Front gate admin area, pending demo FY94. UP as of 8/95	1943	Y	Tested on 11/94. LBP in: windows; doors; Flue to chimney cover. Soil on the south, west, and east sides.	27
133	Front gate admin area	1943	Y	Tested on 11/94. LBP in: windows; door frames. Soil on the east, south, and west sides.	27
134	Front gate admin area	1943	Y	Tested on 11/94. LBP in: windows; door frames. Soil on all four sides.	27
135	Front gate admin area, demolished FY94	1943	Y(P)	Assume presence of LBP; built before 1978.	
136	USAISEC-CONUS Admin	1943	Y(P)	Assume presence of LBP; built before 1978.	
137	USAISEC-CONUS Admin	1943	Y(P)	Assume presence of LBP; built before 1978.	
138	USAISEC-CONUS Admin	1943	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
139	Front gate admin area	1943	Y(P)	Assume presence of LBP; built before 1978.	
140	61090, Front gate admin	1943	Y	Tested on 11/94. LBP in: windows. Soil on north side.	27
141	Electrical Maintenance	1934	Y	Tested on 11/94. LBP in: Wood trim; porch ceiling; Spouting; Garage door. Soil on the east side.	27
143	USAISEC-CONUS Admin	1943	Y(P)	Assume presence of LBP; built before 1978.	
144	Front gate admin area, demolished FY94	1943	Y(P)	Assume presence of LBP; built before 1978.	
147	Finance admin building	1943	Y(P)	Assume presence of LBP; built before 1978.	
148	Office of Acquisition	1943	Y(P)	Assume presence of LBP; built before 1978.	
149	Finance admin building	1943	Y	Tested on 11/94. LBP in: windows; stack panel. soil on south, east, and west sides.	27
150	Drug/alcohol abuse center	1934	Y	Tested on 11/94. LBP in: porch railing.	27
151	Finance admin building	1957	Y(P)	Assume presence of LBP; built before 1978.	
152	Scientific Operations Bldg	1988	N(P)	Assume LBP not present; built after 1978.	
154	Credit Union	1934	N	7/95 Lead paint removal/abatement.	27
155	Family housing, SE	1914	Y	Tested on 11/91. LBP in: Closet doors, jambs, and trim in dining room area; exterior painted surfaces; front door jamb, stair stringers and risers; basement walls; Kitchen walls; Walls sashes, sills, trim and wells.	27
156	Detached garages, SE	1960	Y(P)	Assume presence of LBP; built before 1978.	
160	Data Processing & Telecom	1934	N	Tested on 11/94. LBP in: Wood trim; Beams at main roof and porch roof; Old door frame on west side. Soil on north and south sides. 7/95 Lead paint removal/abatement.	27

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
161	Storage, SE	1933	Y(P)	Assume presence of LBP; built before 1978.	
162	Generator building	NA	Y(P)	Assume presence of LBP when information NA.	
200	Post HQ, SE admin area	1933	Y(P)	Assume presence of LBP; built before 1978.	
201	SE admin area	1933	N	7/95 Lead paint removal/abatement.	27
202	Main library, SE admin area	1933	Y	Tested on 11/94. LBP in: Wood trim at the roof level; Screen door; basement window.	27
203	Post HQ --> Admin	1942	Y(P)	Assume presence of LBP; built before 1978.	
204	SE admin area	1933	Y(P)	Assume presence of LBP; built before 1978.	
205	SE admin area	1934	Y	Tested on 11/94. LBP in: Metal posts; Wood trim at roof level. Soil on south side.	27
206	Storage	1934	N	7/95 Lead paint removal/abatement.	27
210	Flag pole	NA	Y(P)	Assume presence of LBP when information NA.	
301	Photo Lab, SE	1934	Y(P)	Assume presence of LBP; built before 1978.	
302	Post Chapel. SE	1943	Y(P)	Assume presence of LBP; built before 1978.	
303	SE admin area	1953	Y(P)	Assume presence of LBP; built before 1978.	
304	Religious Education Facility	1993	N(P)	Assume presence of LBP; built before 1978.	
305	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
306	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
307	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
308	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

**Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison**

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
309	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
310	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
311	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
312	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
313	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
314	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
315	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
316	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
317	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
318	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
319	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
320	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
321	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
322	SE admin area	1934	Y(P)	Assume presence of LBP; built before 1978.	
323	SE admin area. pending demo FY94, UP as of 8/95	1943	Y	Tested on 11/94. LBP in: windows; doors on the north and west side. Soil on the north, west, and east sides.	27
324	Enlisted Barracks, SE	1943	Y	Tested on 11/94. LBP in: windows; stack panel. Soil on the east, west, and north sides.	27

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
325	Senior enlisted quarters, SE admin area. pending demo FY94, UP as of 8/95	1943	Y	Tested on 11/94. LBP in: windows; basement door and frame on north side. Soil on the east and west sides.	27
326	Museum, SE admin area	1933	Y	Tested on 11/94. LBP in: windows; Siding; Wood trim at roof level; porch ceiling. Soil on south and west sides.	27
327	Access facility, SE	1955	Y(P)	Assume presence of LBP; built before 1978.	
329	73055, SE admin area	1974	Y(P)	Assume presence of LBP; built before 1978.	
330	SE admin area, Banfill Ave	1934	N	7/95 Lead paint removal/abatement.	27
331	61090, SE admin area	1943	Y	Tested on 11/94. LBP in: windows. Soil on north and east sides.	27
332	Dental clinic. SE admin area	1943	Y(P)	Assume presence of LBP; built before 1978.	
333	SE admin area	1943	Y(P)	Assume presence of LBP; built before 1978.	
334	SE admin area	1943	Y(P)	Assume presence of LBP; built before 1978.	
335	SE admin area	1943	Y(P)	Assume presence of LBP; built before 1978.	
336	Education Center	1943	Y	Tested on 11/94. LBP in: door frames; windows. Soil on all four sides.	27
337	Education Center	1943	Y	Tested on 11/94. LBP in: windows; doors and frames on north side; stack panel. Soil on west and east sides.	27
341	Health clinic, SE	1964	Y(P)	Assume presence of LBP; built before 1978.	
343	SE admin area	1934	N	7/95 Lead paint abatement/removal.	27
346	Wood Skill Center, SE	1943	Y(P)	Assume presence of LBP; built before 1978.	
347	Skills development center	1984	N(P)	Assume LBP not present; built after 1978.	
349	Military personnel admin	1943	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
350	Military personnel admin	1943	Y(P)	Assume presence of LBP; built before 1978.	
351	Army family support facility. demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
360	SE along Ritchie Rd	1934	Y(P)	Assume presence of LBP; built before 1978.	
400	SE along Ritchie Rd	1959	Y(P)	Assume presence of LBP; built before 1978.	
401	Hazmat storage, Auto skills center, SE	1934	Y(P)	Assume presence of LBP; built before 1978.	
402	CO HQ Bldg, SE	1964	Y(P)	Assume presence of LBP; built before 1978.	
403	CO HQ Bldg, SE	1964	Y(P)	Assume presence of LBP; built before 1978.	
413	Well 1, SW Family Housing	1943	Y(P)	Assume presence of LBP; built before 1978.	
447	73055, SW Family Housing	1976	Y(P)	Assume presence of LBP; built before 1978.	
448	73055, SW Family Housing	1976	Y(P)	Assume presence of LBP; built before 1978.	
450	Family housing, SW	1958	Y(P)	Assume presence of LBP; built before 1978.	
451	Family housing, SW	1958	Y(P)	Assume presence of LBP; built before 1978.	
452-3	Family housing, SW	1958	Y	Tested on 11/91. LBP found.	9
453	Family housing, SW	1958	Y(P)	Assume presence of LBP; built before 1978.	
454	Family housing, SW	1958	Y(P)	Assume presence of LBP; built before 1978.	
455	Family housing, SW	1958	Y(P)	Assume presence of LBP; built before 1978.	
457-4	Family housing, SW	1958	Y	Tested on 11/91. LBP found.	9
458-3	Family housing, SW, Unit 3	1962	Y	Tested on 11/91. LBP found.	9

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
458-6	Family housing, SW, Unit 6	1962	Y	Tested on 11/91. LBP found.	9
459-3	Family housing, SW, Unit 3	1962	Y	Tested on 11/91. LBP found.	9
460	Family housing, SW	1962	Y(P)	Assume presence of LBP; built before 1978.	
461-2	Attached shed door	1962	Y	Tested on 11/91. LBP found at readings of XRF = 2.9 mg/cm ²	9
462	W chicken spring toy Y slide W slide	NA	N	Tested on 11/91. LBP not found.	9
462-3	Family housing, SW, Unit 3	1962	Y	LBP found.	
462-4	Family housing, SW, Unit 4	1962	Y	LBP found.	
463	Family housing, SW	1962	Y(P)	Assume presence of LBP; built before 1978.	
464-1	Attached shed door	1962	Y	Tested on 11/91. LBP found at readings of XRF = 2.9 mg/cm ²	9
464-3	Family housing, SW, Unit 3	1962	Y	LBP found.	
465	Family housing, SW	1962	Y(P)	Assume presence of LBP; built before 1978.	
466	Family housing, SW	1962	Y(P)	Assume presence of LBP; built before 1978.	
467	Family housing, SW	1962	Y(P)	Assume presence of LBP; built before 1978.	
468	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
469	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
470	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
471	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
472	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
473	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
474	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
475	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
476-1	Family housing, SW, Unit 1	1964	Y	Tested on 11/91. LBP found.	9
477	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
478	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
479	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
480-1	Family housing, SW, Unit 1	1964	Y	Tested on 11/91. LBP found.	9
480-2	Family housing, SW, Unit 2	1964	Y	Tested on 11/91. LBP found.	9
480-3	Family housing, SW, Unit 3	1964	Y	Tested on 11/91. LBP found.	9
481-1	Family housing, SW, Unit 1	1964	Y	Tested on 11/91. LBP found.	9
482-2	Family housing, SW, Unit 2	1964	Y	Tested on 11/91. LBP found.	9
483	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
484-3	Family housing, SW, Unit 3	1964	Y	Tested on 11/91. LBP found.	9
485	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
486-1	Family housing, SW, Unit 1	1964	Y	LBP found.	
487	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	

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Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
488	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
489	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
490	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
491	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
492	73055, SW, W Reckord Ave	1976	Y(P)	Assume presence of LBP; built before 1978.	
493	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
494	73055, SW, Mountain Rd	1976	Y(P)	Assume presence of LBP; built before 1978.	
495	Family housing, SW	1964	Y(P)	Assume presence of LBP; built before 1978.	
496	73055, SW, Mountain Rd	1976	Y(P)	Assume presence of LBP; built before 1978.	
497	73055, SW, Mountain Rd	1976	Y(P)	Assume presence of LBP; built before 1978.	
500	S Enlisted Barracks	1964	Y(P)	Assume presence of LBP; built before 1978.	
501	S of Lake Wastler	NA	Y(P)	Assume presence of LBP when information NA.	
502	73010, Fire Station, demolished FY94	1943	Y(P)	Assume presence of LBP; built before 1978.	
503	Garrison Commander	1964	Y(P)	Assume presence of LBP; built before 1978.	
504	Exchange Service Outlet	1952	Y(P)	Assume presence of LBP; built before 1978.	
505	84132, demolished FY92, Well 3	1964	Y(P)	Assume presence of LBP; built before 1978.	
506	Childhood Developmt Center	1982	N(P)	Assume LBP not present; built after 1978.	
507	44220, Warehouse. demolished FY94	1943	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
508	74021, Commissary, demolished FY94	1943	Y(P)	Assume presence of LBP; built before 1978.	
509	Bowling Center	1983	N(P)	Assume LBP not present; built after 1978.	
510	Childhood Developmt Center	1991	N(P)	Assume LBP not present; built after 1978.	
511	Fast food/ Snack bar	1977	Y(P)	Assume presence of LBP; built before 1978.	
512	Tennis Court	NA	Y(P)	Assume presence of LBP when information NA.	
514	Septic, Toilet/Shower	1974	Y(P)	Assume presence of LBP; built before 1978.	
515	Auto Service Station	1973	Y(P)	Assume presence of LBP; built before 1978.	
517	Main store	1992	N(P)	Assume LBP not present; built after 1978.	
518	Commissary	1994	N(P)	Assume LBP not present; built after 1978.	
519	Fire Station	1994	N(P)	Assume LBP not present; built after 1978.	
520	Guest House, SW Housing	1973	Y(P)	Assume presence of LBP; built before 1978.	
521	Youth Activity Center, West	1983	N(P)	Assume LBP not present; built after 1978.	
601	DEH Facility	1953	N	7/95 Lead paint removal/abatement.	27
602	DEH Facility	1933	Y(P)	Assume presence of LBP; built before 1978.	
603	DEH Facility	1953	N	7/95 Lead paint removal/abatement.	27
604	Flight control tower. demolished, FY94	1956	Y(P)	Assume presence of LBP; built before 1978.	
	Substation. Next to B-604	NA	Y(P)	Assume presence of LBP when information NA.	
	Baltimore COE Trailer	NA	Y(P)	Assume presence of LBP when information NA.	
605	DEH Facility	1952	N	7/95 Lead paint removal/abatement.	27

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
606	General admin	1986	N(P)	Assume LBP not present; built after 1978.	
607	SE of Lake Wastler	1990	N(P)	Assume LBP not present; built after 1978.	
700	Motor Pool	1952	Y(P)	Assume presence of LBP; built before 1978.	
701	Motor Pool. demolished FY94	1975	Y(P)	Assume presence of LBP; built before 1978.	
709	73055, W Housing Area	1971	Y(P)	Assume presence of LBP; built before 1978.	
710	Officer family housing, West	1952	Y	Tested on 11/91. LBP in: baseboards; ceilings; interior doors, jambs, and trim; painted floors; front/rear/side entry doors, jambs and trim; stairway newel posts; interior/exterior painted pipes; Plumbing access door; radiators; exterior painted surfaces; exterior screen doors and porch floors; shelves and supports; window sashes, sills, trim, and wells; interior walls, stairway floor headers to basement.	9
711	Detached garages, West	1952	Y(P)	Assume presence of LBP; built before 1978.	
712	Tennis court, W Housing Area	NA	Y(P)	Assume presence of LBP when information NA.	
713	Motor Pool: op. & dispatch	1972	Y(P)	Assume presence of LBP; built before 1978.	
716	EEO Office	1952	N	7/95 Lead paint removal/abatement.	27
718	Motor Pool Area	NA	Y(P)	Assume presence of LBP when information NA.	
720	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
721-2	Family housing, West, Unit 2	1964	Y	Tested on 11/91. LBP found.	9
722	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
723-2	Family housing, West, Unit 2	1964	Y	Tested on 11/91. LBP found.	9
724	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
725	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
726	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
727	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
728	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
729	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
730-1	Family housing, West, Unit 1	1964	Y	Tested on 11/91. LBP found.	9
731	W Housing Area	NA	Y(P)	Assume presence of LBP when information NA.	
732	44262, W DEH Maint & Eqp	1964	Y(P)	Assume presence of LBP; built before 1978.	
733	44262, W DEH Maint & Eqp	1968	Y(P)	Assume presence of LBP; built before 1978.	
734	West DEH Maint & Eqp	1974	Y(P)	Assume presence of LBP; built before 1978.	
735	44222, W DEH Maint & Eqp	1975	Y(P)	Assume presence of LBP; built before 1978.	
736	West DEH Maint & Eqp	1975	Y(P)	Assume presence of LBP; built before 1978.	
742	73055, W Housing Area	1976	Y(P)	Assume presence of LBP; built before 1978.	
743	Detached garages	1969	Y(P)	Assume presence of LBP; built before 1978.	
745	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
746	Family housing, West	1962	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
747	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
748-2	Family housing, West, Unit 2	1962	Y	Tested on 11/91. LBP found.	9
749	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
750	Family housing, West	1958	Y(P)	Assume presence of LBP; built before 1978.	
751	Family housing, West	1958	Y(P)	Assume presence of LBP; built before 1978.	
751	Y merry go round W pelican spring toy	NA	N	Tested on 11/91. LBP not found.	9
752	Family housing, West	1958	Y(P)	Assume presence of LBP; built before 1978.	
753-2	Family housing, West, Unit 2	1958	Y	Tested on 11/91. LBP found.	9
754	Family housing, West	1962	Y(P)	Assume presence of LBP; built before 1978.	
755-5	Family housing, West, Unit 5	1962	Y	Tested on 11/91. LBP found.	9
756	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
757	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
758	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
759	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
760	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
761-1	Family housing, West, Unit 1	1964	Y	Tested on 11/91. LBP found.	9
762	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
763	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
764	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
765	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
766	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
767	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
768	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
769	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
770	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
771	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
772	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
773	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
775	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
776	73055, West, Cushman Ave	1974	Y(P)	Assume presence of LBP; built before 1978.	
777	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
778	73055, West, Catoctin Circle	1974	Y(P)	Assume presence of LBP; built before 1978.	
779-1	Family housing, West, Unit 1	1964	Y	Tested on 11/91. LBP found.	9
781	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
783	Family housing, West	1964	Y(P)	Assume presence of LBP; built before 1978.	
785-2	Family housing, West, Unit 2	1964	Y	Tested on 11/91. LBP found.	9

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
800	UOQ Military\Transient	1965	Y(P)	Assume presence of LBP; built before 1978.	
809	Detached garages, NW Area	1962	Y(P)	Assume presence of LBP; built before 1978.	
811	Cols Officers Quarters	1942	Y	Tested on 11/91. LBP in: baseboards; exterior painted surfaces; interior door jambs and casings; front door jamb; Rear/side entry doors; Scuttle doors and trim; window sashes, trim, sills, and wells.	9
825	Boat House, Lake Royer	1943	Y(P)	Assume presence of LBP; built before 1978.	
828	74067, Storage. demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
829	74078, Thrift shop. demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
831	76010, Museum. demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
832	N shore of Lake	NA	Y(P)	Assume presence of LBP when information NA.	
833	44220, Warehouse. demolished FY92	1943	Y(P)	Assume presence of LBP; built before 1978.	
834	Outdoor Recreation Center	1943	Y(P)	Assume presence of LBP; built before 1978.	
835	Water treatment building	1968	Y(P)	Assume presence of LBP; built before 1978.	
836	Filter plant, swimming pool	1975	Y(P)	Assume presence of LBP; built before 1978.	
837	Warehouse, NW Area	1975	Y(P)	Assume presence of LBP; built before 1978.	
838	ACES facility, N of Lake Wastler	1974	Y(P)	Assume presence of LBP; built before 1978.	
839	Storage	1993	N(P)	Assume LBP not present; built after 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
860	Family housing, NW	1960	Y	Tested on 11/91. LBP in: baseboards; interior doors, jambs and trim; front/rear/side entry doors, jambs, and trim; stairway newel posts; window sashes, sills, trim, wells; exterior painted surfaces.	9
907	Refuse\Garbage Building	1952	Y(P)	Assume presence of LBP; built before 1978.	
908	Refuse\Garbage Building	1952	Y(P)	Assume presence of LBP; built before 1978.	
909	Storage, N border	1943	Y(P)	Assume presence of LBP; built before 1978.	
930	Sewage pump station	1982	N(P)	Assume LBP not present; built after 1978.	
1000	300,000-gallon Post Reservoir	1952	Y(P)	Assume presence of LBP; built before 1978.	
1001	Well 4, NW by WWTP	1952	Y(P)	Assume presence of LBP; built before 1978.	
1002	Well 5, N, across Rt 550	1952	Y(P)	Assume presence of LBP; built before 1978.	
1003	Well 6, N, across Rt 550	1952	Y(P)	Assume presence of LBP; built before 1978.	
1004	Well 7, N, across Rt 550	1952	Y(P)	Assume presence of LBP; built before 1978.	
1005	Well 8, N, across Rt 550	1952	Y(P)	Assume presence of LBP; built before 1978.	
1006	1,000,000 Post Reservoir SW	1953	Y(P)	Assume presence of LBP; built before 1978.	
1009	44222, W on Reservoir Rd	1978	Y(P)	Assume presence of LBP; built before 1978.	
1010	1,000,000 gal SW	1953	Y(P)	Assume presence of LBP; built before 1978.	
1011	Chlorinator bldg	1953	Y(P)	Assume presence of LBP; built before 1978.	
1012	Water treatment	1943	Y(P)	Assume presence of LBP; built before 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

Table F-2. Summary of Lead Based Paint (continued)
Fort Ritchie Army Garrison

Bldg No.	Design Usage & Location	Year Built	Status	Remarks	Source App A
1013	Water well & pump	1992	N(P)	Assume LBP not present; built after 1978.	
1025	ARNG/USAR Center	1993	N(P)	Assume LBP not present; built after 1978.	

Y = Tested and excessive LBP was identified.
Y(P) = Not tested, but assumed LBP is present because age of building is unknown or earlier than 1978.
N(P) = Not tested, but assumed LBP is not present because age of building is after 1978.
N = Tested and LBP was not identified.

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**Table F-3. PCBs Inventory
Fort Ritchie Army Garrison**

Pole	Building Number/ Location	Status	Remarks	Source App A
101	504	N	Tested. PCB not present.	23,54
101	504	N	Tested. PCB not present.	23,54
101	504	N	Tested. PCB not present.	23,54
105A	746	N	Tested. PCB not present.	23,54
106	ballfield	N	Tested. PCB not present.	23,54
106	ballfield	N	Tested. PCB not present.	23,54
106	ballfield	N	Tested. PCB not present.	23,54
106A	746	N	Tested. PCB not present.	23,54
108A	750	N	Tested. PCB not present.	23,54
108A	750	N	Tested. PCB not present.	23,54
108A	750	N	Tested. PCB not present.	54
111	700	N	Tested. PCB not present.	23,54
111	700	N	Tested. PCB not present.	23,54
111	700	N	Tested. PCB not present.	23,54
112A	755	N	Tested. PCB not present.	23,54
116A	761	N	Tested. PCB not present.	23,54
120	800	N	Tested. PCB not present.	23,54
120	800	N	Tested. PCB not present.	23,54
120	800	N	Tested. PCB not present.	23,54
125	834	N	Tested. PCB not present.	23,54
125A	771	N	Tested. PCB not present.	54
127	835	N	Tested. PCB not present.	54
127	835	N	Tested. PCB not present.	23,54
127	835	N	Tested. PCB not present.	23,54
127	835	N	Tested. PCB not present.	23,54
130B	520	Y	Not tested but PCB labeled. DISPOSED	22,54, 71
130B	520	Y	Not tested but PCB labeled. DISPOSED	22,54, 71
130B	520	Y	Not tested but PCB labeled. DISPOSED	22,54, 71

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
130-B	835	N	Tested. PCB not present.	23,54
130-B	835	N	Tested. PCB not present.	23,54
130-B	835	N	Tested. PCB not present.	23,54
134A	781	N	Tested. PCB not present.	23,54
136	837	N	Tested. PCB not present.	23,54
145	909	N	Tested. PCB not present.	23,54
147	900	N	Tested. PCB not present.	23,54
147	900	N	Tested. PCB not present.	23,54
147	900	N	Tested. PCB not present.	23,54
156	837	N	Tested. PCB not present.	23,54
158	837, thrift shop	N	Tested. PCB not present.	22,54
161	485	N	Tested. PCB not present.	23,54
165	860	N	Tested. PCB not present.	23,54
183	710	N	Tested. PCB not present.	23,54
185	Range Rd	N	Tested. PCB not present.	23,54
190	722	N	Tested. PCB not present.	23,54
197	727	N	Tested. PCB not present.	54
197	727	N	Tested. PCB not present.	54
197	727	N	Tested. PCB not present.	54
203	400	N	Tested. PCB not present.	23,54
205	401	N	Tested. PCB not present.	23,54
205	401	N	Tested. PCB not present.	23,54
205	401	N	Tested. PCB not present.	23,54
205	Tower	N	Tested. PCB not present.	23,54
207	350	N	Tested. PCB not present.	23,54
207	350	N	Tested. PCB not present.	23,54
207	350	N	Tested. PCB not present.	23,54
210A	500	N	Tested. PCB not present.	23,54
210A	500	N	Tested. PCB not present.	23,54
210A	500	N	Tested. PCB not present.	23,54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
212/213	303	N	Tested. PCB not present.	23,54
212/213	303	N	Tested. PCB not present.	23,54
212/213	303	N	Tested. PCB not present.	23,54
213A	320	N	Tested. PCB not present.	23,54
214A	316	N	Tested. PCB not present.	23,54
214A	316	N	Tested. PCB not present.	23,54
214A	316	N	Tested. PCB not present.	23,54
215	301	N	Tested. PCB not present.	23,54
215	301	N	Tested. PCB not present.	23,54
215	301	N	Tested. PCB not present.	23,54
215A	313	N	Tested. PCB not present.	23,54
215A	313	N	Tested. PCB not present.	23,54
215A	313	N	Tested. PCB not present.	23,54
216A	309	N	Tested. PCB not present.	23,54
217A	307	N	Tested. PCB not present.	23,54
217A	307	N	Tested. PCB not present.	23,54
217A	307	N	Tested. PCB not present.	23,54
221	323	N	Tested. PCB not present.	54
221	323	N	Tested. PCB not present.	23,54
221	323	N	Tested. PCB not present.	54
221	323	N	Tested. PCB not present.	23,54
221	323	N	Tested. PCB not present.	23,54
221	323	N	Tested. PCB not present.	54
222	203	N	Tested. PCB not present.	54
222	203	N	Tested. PCB not present.	54
222	203	N	Tested. PCB not present.	54
224	200	N	Tested. PCB not present.	23,54
224	200	N	Tested. PCB not present.	23,54
224	200	N	Tested. PCB not present.	23,54
227	102	N	Tested. PCB not present.	23,54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
227	102	N	Tested. PCB not present.	23,54
227	102	N	Tested. PCB not present.	23,54
228A	332	N	Tested. PCB not present.	23,54
228A	332	N	Tested. PCB not present.	23,54
228A	332	N	Tested. PCB not present.	23,54
229A	333	N	Tested. PCB not present.	23,54
229A	333	N	Tested. PCB not present.	23,54
229A	333	N	Tested. PCB not present.	23,54
230	335	N	Tested. PCB not present.	23,54
230	335	N	Tested. PCB not present.	23,54
230	335	N	Tested. PCB not present.	23,54
230/231	101	N	Tested. PCB not present.	23,54
230/231	101	N	Tested. PCB not present.	23,54
230/231	101	N	Tested. PCB not present.	23,54
231A	346	N	Tested. PCB not present.	23,54
231A	346	N	Tested. PCB not present.	23,54
231A	346	N	Tested. PCB not present.	23,54
235	2	N	Tested. PCB not present.	22,54
236	123	N	Tested. PCB not present.	54
236	123	N	Tested. PCB not present.	54
236	123	N	Tested. PCB not present.	54
240	128	N	Tested. PCB not present.	54
240	128	N	Tested. PCB not present.	54
240	128	N	Tested. PCB not present.	54
247/248	160	N	Not tested. LABELED as non-PCB	54
247/248	160	N	Not tested. LABELED as non-PCB	54
247/248	160	N	Not tested. LABELED as non-PCB	54
248	106	N	Tested. PCB not present.	54
249	109	N	Tested. PCB not present.	54
249	109	N	Tested. PCB not present.	54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
249	109	N	Tested. PCB not present.	54
250	113	N	Tested. PCB not present.	54
250	113	N	Tested. PCB not present.	54
250	113	N	Tested. PCB not present.	54
252	116	N	Not tested. LABELED as non-PCB	54
252	116	N	Not tested. LABELED as non-PCB	54
252	116	N	Not tested. LABELED as non-PCB	54
253	119	Y	Tested. PCB present.	54
253	119	Y	Tested. PCB present.	54
253	119	Y	Tested. PCB present.	54
254	122	N	Tested. PCB not present.	54
254	122	N	Tested. PCB not present.	54
254	122	N	Tested. PCB not present.	54
258	149	N	Tested. PCB not present.	54
258	149	N	Tested. PCB not present.	54
258	149	N	Tested. PCB not present.	54
260	150	N	Tested. PCB not present.	54
268	161	Y	Tested and PCB found to be present.	22,23, 54
270	143	N	Tested. PCB not present.	54
270	143	N	Tested. PCB not present.	54
270	143	N	Tested. PCB not present.	54
271	144	N	Tested. PCB not present.	54
277	132	N	Tested. PCB not present.	54
277	132	N	Tested. PCB not present.	54
277	132	N	Tested. PCB not present.	54
280	206	N	Tested. PCB not present.	54
280	206	N	Tested. PCB not present.	54
280	206	N	Tested. PCB not present.	54
281	206	N	Tested. PCB not present.	23,54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
289	343	N	Tested. PCB not present.	23,54
307	603	N	Tested. PCB not present.	54
307	603	N	Tested. PCB not present.	54
307	603	N	Tested. PCB not present.	54
309	602	N	Tested. PCB not present.	54
309	602	N	Tested. PCB not present.	54
309	602	N	Tested. PCB not present.	54
313	601	N	Tested. PCB not present.	54
313	601	N	Tested. PCB not present.	54
313	601	N	Tested. PCB not present.	54
314	601	N	Tested. PCB not present.	54
314	601	N	Tested. PCB not present.	54
314	601	N	Tested. PCB not present.	54
326	11	N	Tested. PCB not present.	47,54
326	11	N	Tested. PCB not present.	47,54
326	11	N	Tested. PCB not present.	47,54
330	Xmas tree	N	Tested. PCB not present.	54
337	5	N	Tested. PCB not present.	54
337	5	N	Tested. PCB not present.	54
337	5	N	Tested. PCB not present.	54
341	2	N	Tested. PCB not present.	54
341	2	N	Tested. PCB not present.	54
341	2	N	Tested. PCB not present.	54
409	508	N	Tested. PCB not present.	23,54
409	508	N	Tested. PCB not present.	23,54
409	508	N	Tested. PCB not present.	23,54
413	490	N	Tested. PCB not present.	23,54
413	490	N	Tested. PCB not present.	23,54
413	490	N	Tested. PCB not present.	23,54
422/423	508	N	Tested. PCB not present.	23,54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
422/423	508	N	Tested. PCB not present.	23,54
422/423	508	N	Tested. PCB not present.	23,54
429	451	Y	Tested and PCB found to be present. REMOVED	22,23, 54
434	457	N	Tested. PCB not present.	23,54
437	459	N	Tested. PCB not present.	23,54
438	461	N	Tested. PCB not present.	23,54
440	463	N	Tested. PCB not present.	23,54
442	485	N	Tested. PCB not present.	23,54
444	467	N	Tested. PCB not present.	23,54
449	468	N	Tested. PCB not present.	23,54
453	472	N	Tested. PCB not present.	23,54
458	476	N	Tested. PCB not present.	23,54
464	491	N	Tested. PCB not present.	23,54
469	484	N	Tested. PCB not present.	23,54
472	490	N	Tested. PCB not present.	23,54
481	Range Rd	N	Tested. PCB not present.	23,54
494	Range Rd	N	Tested. PCB not present.	23,54
500	1010	N	Tested. PCB not present.	23,54
500	1010	N	Tested. PCB not present.	23,54
500	1010	N	Tested. PCB not present.	23,54
PAD	152	N	Not tested. LABELED as non-PCB.	54
PAD	341	N	Tested. PCB not present.	23,54
PAD	347	N	Not tested. LABELED as non-PCB.	54
PAD	360	N	Not tested. LABELED as non-PCB.	54
VAULT	400	Y	Not tested but PCB labeled. DISPOSED.	22,24, 54,71
VAULT	402	Y	Not tested but PCB labeled. DISPOSED	22,54, 71
VAULT	403	Y	Not tested but PCB labeled. DISPOSED	22,54, 71

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
PAD	503	N	Tested. PCB not present.	23,54
PAD	506	N	Tested. PCB not present.	23,54
PAD	509	N	Not tested. LABELED as non-PCB.	54
PAD	515	N	Not tested. No fluid in the transformer: DRY.	54
PAD	521	N	Tested and LABELED as non-PCB.	23,54
PAD	800	N	Tested. PCB not present.	23,54
PAD	837	N	Tested. PCB not present.	23,54
PAD	902	N	Not tested. No fluid in the transformer: DRY	54
PAD	917	N	Not tested. No fluid in the transformer: DRY	54
PAD		N	Tested and LABELED as non-PCB.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	22,23, 54
	substation	N	Tested. PCB not present.	54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	22,23, 54
stock	909	N	Tested. PCB not present.	22,23, 54
stock	909	Y	Tested and PCB found to be present. REMOVED	22,23, 54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

Table F-3. PCBs Inventory (continued)
Fort Ritchie Army Garrison

Pole	Building Number/ Location	Status	Remarks	Source App A
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Not tested. LABELED as non-PCB.	54
stock	909	N	Not tested. LABELED as non-PCB.	54
stock	909	N	Not tested. LABELED as non-PCB.	54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54
stock	909	N	Tested. PCB not present.	23,54

Y = Tested and PCBs have been detected.
Y(P) = PCBs may be present.
N = PCBs are known not to be present because of label or testing.

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**Table F-4. Radionuclides Inventory
Fort Ritchie Army Garrison**

Location	Equipment	Remarks	Source App A
Museum (326)	night vision scope, compass, etc.	Items on display.	19,37,38
Health Clinic (341)	X-ray machine	In use.	19,37,38
Dental Clinic (332)	X-ray machine	In use.	19,37,38
572nd Military Police Company (402)	11 lensatic compasses containing tritium (H ₃)	NRC license BML 24-12705-01. (24-21015-01). Managed by US Army Troop Support Command (TROSCOM).	37,38
572nd Military Police Company (402)	2 night vision devices containing thorium lenses	NRC license BML 29-01022-14. Managed by US Army Armament, Munitions, and Chemical Command (AMCCOM).	37,38
572nd Military Police Company (402)	AN/PDR-27 RADIAC check sources containing Krypton-85	NRC license BML 29-01022-14. Managed by US Army Armament, Munitions, and Chemical Command (AMCCOM).	37,38
572nd Military Police Company (402)	12 light anti-tank weapons rockets containing promethium-147 sights	NRC license BML 12-00722-07. Managed by US Army Communications-Electronics Command (CECOM).	37,38
DEH (601-605)	XRF lead paint meter	XRF License No. A 19-0002- RITCHIE. Sealed source to be replaced once every 9 months. Just purchased in 1995.	19,37,38
Leonard J Riley Memorial Historic Holdings (831)	WWII vintage compass	Unauthorized radioactive material.	19,37,38
Transport of radioactive materials on and off Ft. Ritchie during construction projects	Density/moisture devices	No documentation of NRC or State Agreement license or Department of Army Radiation Permit (DARP) to transport, use, and store radioactive materials on the installation.	37,38

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The EDR Area Study Report

**Study Area
Fort Ritchie
Washington County, Maryland**

August 29, 1995

Inquiry number 87183



**Environmental
Data
Resources, Inc.**

Creators of Toxichex/®

***The Source* For Environmental Risk Management Data**

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

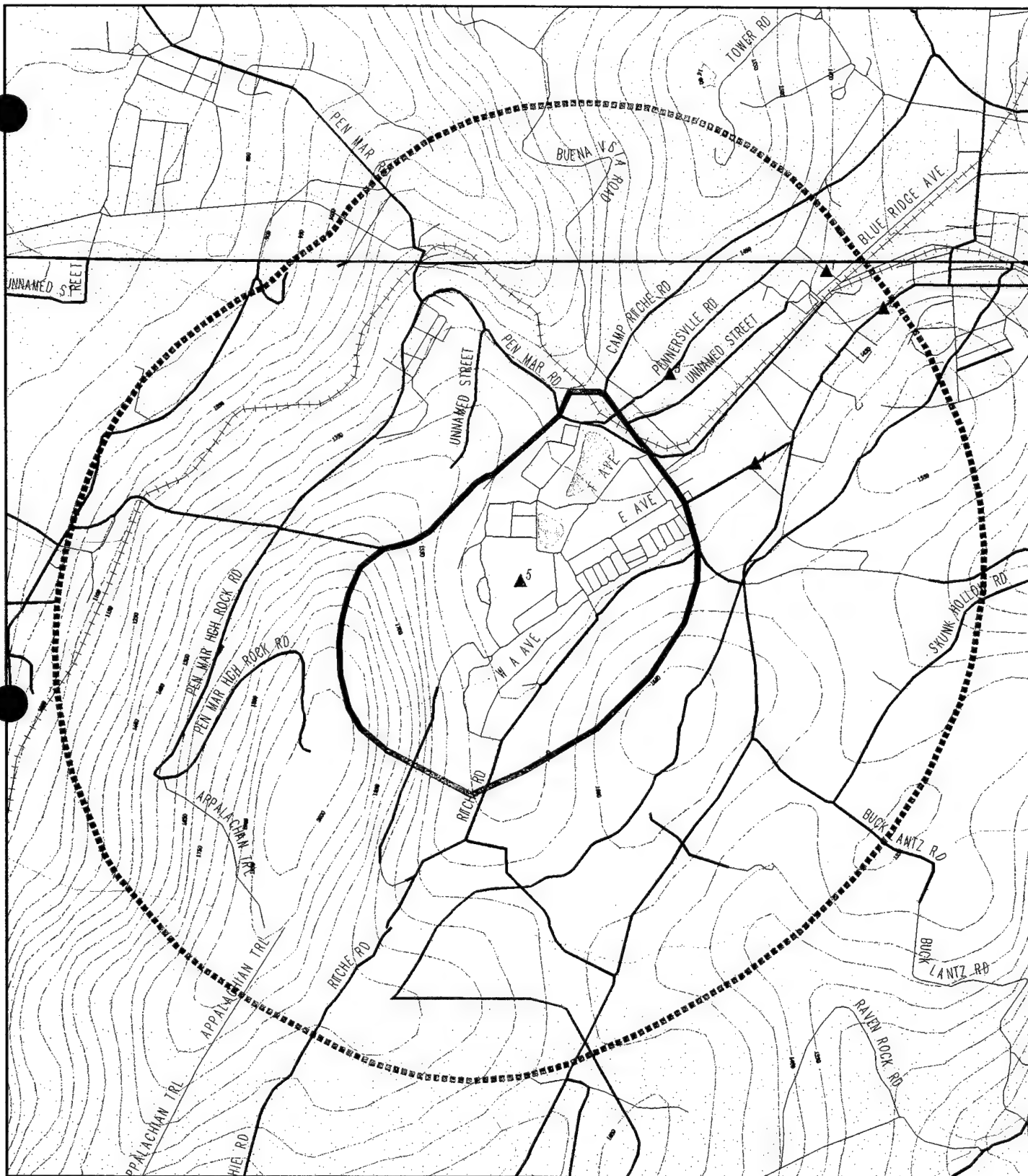
Telephone: 1-800-352-0050
Fax: 1-800-231-6802

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR Environmental
Data
Resources, Inc.

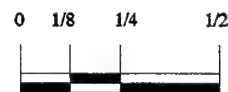
Creators of Techcheck

1-800-352-0060

Study Area For Fort Ritchie Washington Co. Maryland

Legend

- | | | | | |
|---|-------------|---------------|-------------|-----------------|
| Listed Sites | Roads | Railroads | Powerlines | Superfund Sites |
| Earthquake Epicenters
(Richter 5 or greater) | Major Roads | Contour Lines | Fault Lines | |
| Study Area Boundary | Waterways | Pipelines | Water | |



Scale in Miles



GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM RECORDS:

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA/NTIS

Telephone: 703-416-0702

CERCLIS: CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/15/95

Date Made Active at EDR: 06/08/95

Date of Data Arrival at EDR: 04/25/95

Elapsed ASTM days: 44

ERNS: Emergency Response Notification System

Source: EPA

Telephone: 202-260-2342

ERNS: Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/94

Date Made Active at EDR: 05/25/95

Date of Data Arrival at EDR: 04/11/95

Elapsed ASTM days: 44

NPL: National Priority List

Source: EPA

Telephone: 703-603-8852

NPL: National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, it is EDR's policy to plot NPL sites greater than approximately 500 acres in size as areas (polygons). Sites smaller in size are point-geocoded at the site's address.

Date of Government Version: 05/26/95

Date Made Active at EDR: 06/06/95

Date of Data Arrival at EDR: 06/06/95

Elapsed ASTM days: 0

RCRIS: Resource Conservation and Recovery Information System

Source: EPA/NTIS

Telephone: 202-260-3393

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 05/31/95

Date Made Active at EDR: 08/22/95

Date of Data Arrival at EDR: 06/28/95

Elapsed ASTM days: 55

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDERAL NON-ASTM RECORDS:

CONSENT: Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices

Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: Varies

Date of Next Scheduled Update: 09/01/95

CORRACTS: Corrective Action Report

Source: EPA

Telephone: 202-260-3393

CORRACTS: CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 04/10/95

Date of Next Scheduled Update: 09/18/95

FINDS: Facility Index System

Source: EPA/NTIS

Telephone: 800-908-2493

FINDS: Facility Index System. FINDS contains both facility information and "pointers" to other sources that contain more detail. These include: RCRIS, PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]), CERCLIS, DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), FRDS (Federal Reporting Data System), SIA (Surface Impoundments), CICIS (TSCA Chemicals in Commerce Information System), PADS, RCRA-J (medical waste transporters/disposers), TRIS and TSCA.

Date of Government Version: 07/27/94

Date of Next Scheduled Update: 10/16/95

HMIRS: Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation

Telephone: 202-366-4555

HMIRS: Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/30/94

Date of Next Scheduled Update: 12/04/95

MLTS: Material Licensing Tracking System

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/01/95

Date of Next Scheduled Update: 10/16/95

NPL LIENS: Federal Superfund Liens

Source: EPA

Telephone: 202-260-8969

NPL LIENS: Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91

Date of Next Scheduled Update: 11/27/95

PADS: PCB Activity Database System

Source: EPA

Telephone: 202-260-3992

PADS: PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/14/94

Date of Next Scheduled Update: 09/18/95

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RAATS: RCRA Administrative Action Tracking System

Source: EPA

Telephone: 202-564-4104

RAATS: RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA.

Date of Government Version: 04/17/95

Date of Next Scheduled Update: 10/02/95

ROD: Records Of Decision

Source: NTIS

Telephone: 703-416-0703

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 03/31/95

Date of Next Scheduled Update: 12/04/95

TRIS: Toxic Chemical Release Inventory System

Source: EPA/NTIS

Telephone: 202-260-2320

TRIS: Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/92

Date of Next Scheduled Update: 10/09/95

TSCA: Toxic Substances Control Act

Source: EPA/NTIS

Telephone: 202-260-1444

TSCA: Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site. USEPA has no current plan to update and/or re-issue this database.

Date of Government Version: 05/15/86

Date of Next Scheduled Update: 09/18/95

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF MARYLAND ASTM RECORDS:

MD LUST: Recovery Sites

Source: Department of the Environment

Telephone: 410-631-3433

LUST: Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents which need remediation. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 05/01/95

Date Made Active at EDR: 08/21/95

Date of Data Arrival at EDR: 07/13/95

Elapsed ASTM days: 39

SHWS: Notice of Potential Hazardous Waste Sites

Source: Department of the Environment

Telephone: 410-631-3440

SHWS: State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 05/31/95

Date Made Active at EDR: 07/27/95

Date of Data Arrival at EDR: 06/29/95

Elapsed ASTM days: 28

SWF/LS: Permitted Solid Waste Disposal Facilities

Source: Department of the Environment

Telephone: 410-631-3364

SWF/LS: Solid Waste Facilities/Landfill Sites. SWF/LS type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/01/95

Date Made Active at EDR: 03/16/95

Date of Data Arrival at EDR: 03/06/95

Elapsed ASTM days: 10

UST: Listing of Underground Storage Tanks Reported In Maryland

Source: Department of the Environment

Telephone: 410-631-3433

UST: Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 05/24/94

Date Made Active at EDR: 08/17/94

Date of Data Arrival at EDR: 06/30/94

Elapsed ASTM days: 48

STATE OF MARYLAND NON-ASTM RECORDS:

AST: Permitted Aboveground Storage Tanks

Source: Department of The Environment

Telephone: 410-631-3386

AST: Aboveground Storage Tanks.

Date of Government Version: 04/17/95

Date of Next Scheduled Update: 11/20/95

Historical and Other Database(s)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

NFRAP: No Further Remedial Action Planned

Source: EPA/NTIS

Telephone: 703-416-0702

NFRAP: As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

FRDS: Federal Reporting Data System

Source: EPA/Office of Drinking Water

FRDS provides information regarding public water supplies and their compliance with monitoring requirements, maximum contaminant levels (MCL's), and other requirements of the Safe Drinking Water Act of 1986.

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals who, due to their fragile immune systems, are deemed to be especially sensitive to environmental discharges. These typically include the elderly, the sick, and children. While the exact location of these sensitive receptors cannot be determined, EDR indicates those facilities, such as schools, hospitals, day care centers, and nursing homes, where sensitive receptors are likely to be located.

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1994 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Maryland Community Public Water Supplies

Source: Department of the Environment

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
NPL	0
Delisted NPL	0
RCRIS-TSD	0
State Haz. Waste	0
CERCLIS	0
CERC-NFRAP	0
CORRACTS	0
State Landfill	0
LUST	0
UST	3
AST	0
RAATS	0
RCRIS Sm. Quan. Gen.	2
RCRIS Lg. Quan. Gen.	0
HMIRS	0
PADS	0
ERNS	0
FINDS	6
TRIS	0
NPL Liens	0
TSCA	0
MLTS	0
ROD	0
CONSENT	0

* Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance	Site	Database(s)	EDR ID Number EPA ID Number																								
1	MARYLAND ARMY NATIONAL GUARD 25510 WARREN AVE CASCADE, MD 21719 RCRIS: Owner: MARYLAND MILITARY DEPT (410) 576-1483 Contact:THEODORE HIMMELBERG (410) 576-1483 <table><tr><td>Waste</td><td>Quantity</td><td>Info Source</td><td>Waste</td><td>Quantity</td><td>Info Source</td></tr><tr><td>D001</td><td>Not reported</td><td>Notification</td><td>D002</td><td>Not reported</td><td>Notification</td></tr><tr><td>D003</td><td>Not reported</td><td>Notification</td><td>D008</td><td>Not reported</td><td>Notification</td></tr><tr><td>F001</td><td>Not reported</td><td>Notification</td><td>F005</td><td>Not reported</td><td>Notification</td></tr></table>	Waste	Quantity	Info Source	Waste	Quantity	Info Source	D001	Not reported	Notification	D002	Not reported	Notification	D003	Not reported	Notification	D008	Not reported	Notification	F001	Not reported	Notification	F005	Not reported	Notification	RCRIS-SQG FINDS	1000908630 MD0000370262
Waste	Quantity	Info Source	Waste	Quantity	Info Source																						
D001	Not reported	Notification	D002	Not reported	Notification																						
D003	Not reported	Notification	D008	Not reported	Notification																						
F001	Not reported	Notification	F005	Not reported	Notification																						
2	JAN-ANN ENTERPRISES, INC. 25607 MILITARY ROAD CASCADE, MD 21769 UST: Facility ID: 6013166 Age: 24 Tank Status: CURRENTL	UST Tank ID: 001 Capacity: 500 Product: HEATING OI	U001554774 N/A																								
3	CASCADE ELEMENTARY SCH 14519 PENNERSVILLE RD CASCADE, MD 21719	FINDS	1000948791 MD0000794867																								
4	GT'S HANDI MARKET 25313 MILITARY ROAD CASCADE, MD 21719 UST: Facility ID: 6013178 Age: 9 Tank Status: CURRENTL Facility ID: 6013178 Age: 9 Tank Status: CURRENTL Facility ID: 6013178 Age: 9 Tank Status: CURRENTL Facility ID: 6013178 Age: 9 Tank Status: CURRENTL	UST Tank ID: 001 Capacity: 6,000 Product: GASOLINE/G Tank ID: 002 Capacity: 4,000 Product: GASOLINE/G Tank ID: 003 Capacity: 4,000 Product: GASOLINE/G Tank ID: 004 Capacity: 4,000 Product: KEROSENE	U001175756 N/A																								
5	DEPARTMENT OF ARMY, FORT RITCHIE ATTN: ASNJ-DEH FORT RITCHIE, MD 21719	UST	U001550654 N/A																								

MAP FINDINGS

Map ID
Direction
Distance

Site

Database(s)

EDR ID Number
EPA ID Number

DEPARTMENT OF ARMY, FORT RITCHIE (Continued)

U001550654

UST:

Facility ID:	3012044	Tank ID:	100-1
Age:	12	Capacity:	5000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	101-1
Age:	Not reported	Capacity:	275
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	102-1
Age:	12	Capacity:	5000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	11-1
Age:	13	Capacity:	8000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	113-1
Age:	12	Capacity:	10000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	123-1
Age:	12	Capacity:	3000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	124-1
Age:	Not reported	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	130-1
Age:	16	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	131-1
Age:	Not reported	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	132-1
Age:	14	Capacity:	2000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	134-1
Age:	14	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	136-1
Age:	15	Capacity:	2000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	138-1
Age:	Not reported	Capacity:	2000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	141-1
Age:	Not reported	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI

MAP FINDINGS

Map ID Direction Distance	Site	Database(s)	EDR ID Number EPA ID Number
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DEPARTMENT OF ARMY, FORT RITCHIE (Continued)

U001550654

Facility ID:	3012044	Tank ID:	143-1
Age:	13	Capacity:	2000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	147-1
Age:	Not reported	Capacity:	1500
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	148-1
Age:	Not reported	Capacity:	2000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	150-1
Age:	Not reported	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	151-1
Age:	15	Capacity:	1000
Tank Status:	CURRENTL	Product:	HEATING OI
Facility ID:	3012044	Tank ID:	151-2
Age:	Not reported	Capacity:	1000
Tank Status:	REMOVED	Product:	HEATING OI

There are 222 other tank details available for this site.

5	FORT RITCHIE MACFEE HILL RD & RI CASCADE, MD 21719	FINDS	1000948816 MD0000795211
5	US ARMY GARRISON FORT RITCHIE ASNJ - DEH - EP FORT RITCHIE, MD 21719	FINDS	1000943481 MD0000287581
5	FT RITCHIE DEPT OF THE ARMY US ARMY GARRISON FORT RITCHIE, MD 21719	FINDS	1000770380 MDD985409150
5	USARMY FT RICHIE ASNJ DEH FT RICHIE, MD 21719	FINDS	1000525555 MD6210120758
5	FORT RITCHIE ATTN: ASNJ - DEH FORT RITCHIE, MD 21719 RCRIS: Not Reported	RCRIS-SQG	1000393649 MD8210020758

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
BLUE RIDGE SUMMIT	1000106527	GAF CORP	RTE 116	17214	RCRIS-SQG, FINDS, TRIS, CERC-NFRAP	
BLUE RIDGE SUMMIT	1000896394	ISP MINERALS INC.	16001 CHARMIAN RD. RTE. 116	17214	TRIS	
BLUE RIDGE SUMMIT	1000572334	USARMY AJCC FORT RITCHIE	HARBAUGH VALLEY RD	17214	FINDS	
BLUE RIDGE SUMMIT	S101101264	DAVID L.GEORGE CLASS 1, DEMO.LANDFIL	RT #16 LR 44 BUCHAN TRAIL EAST	17214	SWF/LF	
CASCADE	U001172082	GT'S HANDI MART	ROUTE 550, N. MILITARY ROAD	21719	UST	3012004
CASCADE	U001554780	DECKER'S MARKET, DECKER, ALAN	14438 MCAFEES HILL ROAD	21719	UST	6013179
CASCADE	U001554802	HIGHFIELD RMS (32300)	MILITARY ROAD	21719	UST	6013225
CASCADE	U001172007	GLENN R.BUMBAUGH.	MILITARY RD.	21719	UST	3011911
FORT RITCHIE	1000524102	MICROWAVE STA DAMASCUS	ASQNJ-DEH	21719	FINDS	
HIGHFIELD	U001550581	HIGHFIELD ARMORY.	ROUTE 01, BOX 248	21719	UST	
SABILLASVILLE	1000945400	SABILLASVILLE ELEMENTARY SCH	16210B SABILLASVILLE RD	21780	FINDS	3011898
SABILLASVILLE	1000525071	VICTOR CULLEN SCHOOL-MES	SABILLASVILLE ROAD FRIDERICK COUNTY	21780	FINDS	
WASHINGTON	1000319539	TRANS SUPPLY CO	RTE 16 GREENCASTLE ST	17268	FINDS, CERC-NFRAP	
WASHINGTON COUNTY	S101273974	RESH ROAD II			SWF/LF	
WAYNESBORO	S101475258	WAYNESBORO MOBIL	RT 316S	17268	LUST	
WAYNESBORO	S101101267	WASHINGTON TWP.M.A/D. & A MILLER FAR	ROUTE 4	17268	SWF/LF	
WAYNESBORO	1000965554	GREEN RIDGE UTILITY CO/GLENN	RTE 5	17268	FINDS	
WAYNESBORO	1000349792	DELPS PATTERN WORKS	RTE 991	17268	RCRIS-SQG, FINDS	
WAYNESBORO	S101101266	WASHINGTON TWP.MAYWATSON STONER FAR	ANTHONY HIWAY RT 997	17268	SWF/LF	
WAYNESBORO	S101101265	WASHINGTON TWP.A./A.BAUMGARDNER FAR	LYONS ROAD T-363	17268	SWF/LF	
WAYNESBORO	1000132597	ALL STAR BODY SHOP	S POTOMAC ST SUITE 2	17268	RCRIS-SQG, FINDS	
WAYNESBORO	1000566793	S POTOMAC LUMBER CO	REAR 246 S POTOMAC S	17268	FINDS	
WAYNESBORO	1000255838	NL IND INC MAGNUS CO INC	7TH & RINGGOLD STS	17268	FINDS, CERC-NFRAP	
WAYNESBORO	1000168327	PRICE DENTAL LABORATORY	209 WAYNE BUILDING	17268	RCRIS-SQG, FINDS	
WAYNESBORO	1000370280	BEARTOWN AUTO BODY	11107 WOOD LN	17268	RCRIS-SQG, FINDS	

DETAILED ORPHAN LISTING

Site	Database(s)	EDR ID Number EPA ID Number
GAF CORP RTE 116 BLUE RIDGE SUMMIT, PA 17214	RCRIS-SQG FINDS TRIS CERC-NFRAP	1000106527 PAD003926763
CERCLIS-NFRAP Classification Data: Site Incident Category: Not reported Ownership Status: OTHER EPA Notes: Not reported CERCLIS-NFRAP Assessment History: Assessment: DISCOVERY Assessment: PRELIMINARY ASSESSMENT CERCLIS-NFRAP Site Status: EPA has conducted a preliminary assessment on this site and has determined that no further action is necessary and no hazard was identified CERCLIS-NFRAP Alias Names: Not Reported RCRIS: Not Reported		
ISP MINERALS INC. 16001 CHARMIAN RD. RTE. 116 BLUE RIDGE SUMMIT, PA 17214	TRIS	1000896394 PA003926763
USARMY AJCC FORT RITCHIE HARBAUGH VALLEY RD BLUE RIDGE SUMMIT, PA 17214	FINDS	1000572334 PA1210190053
DAVID L. GEORGE CLASS 1, DEMO. LANDFIL RT. #16 LR. 44 BUCHAN TRAIL EAST BLUE RIDGE SUMMIT, PA 17214	SWF/LF	S101101264 N/A
Landfill Facility ID: 101305 Last Inspection Date: 11/01/88 Facility Type: RESIDENTIAL DEMOLITION Operational Status: PRIVATE		
GT'S HANDI MART ROUTE 550, N. MILITARY ROAD CASCADE, MD 21719	UST	U001172082 N/A
UST: Facility ID: 3012004 Age: 9 Tank Status: CURRENTL Tank ID: 001 Capacity: 6,000 Product: GASOLINE/G Facility ID: 3012004 Age: 9 Tank Status: CURRENTL Tank ID: 002 Capacity: 4,000 Product: GASOLINE/G Facility ID: 3012004 Age: 9 Tank Status: CURRENTL Tank ID: 003 Capacity: 4,000 Product: GASOLINE/G Facility ID: 3012004 Age: 9 Tank Status: CURRENTL Tank ID: 004 Capacity: 4,000 Product: KEROSENE		

DETAILED ORPHAN LISTING

Site	Database(s)	EDR ID Number EPA ID Number
GT'S HANDI MART (Continued)		U001172082
DECKER'S MARKET, DECKER, ALAN 14438 MCAFEE HILL ROAD CASCADE, MD 21719	UST	U001554780 N/A
UST: Facility ID: 6013179 Age: 16 Tank Status: CURRENTL	Tank ID: 001 Capacity: 2,000 Product: HEATING OI	
HIGHFIELD RMS (32300) MILITARY ROAD CASCADE, MD 21719	UST	U001554802 N/A
UST: Facility ID: 6013225 Age: 6 Tank Status: CURRENTL	Tank ID: 001 Capacity: 1,000 Product: DIESEL	
GLENN R.BUMBAUGH, MILITARY RD. CASCADE, MD 21719	UST	U001172007 N/A
UST: Facility ID: 3011911 Age: 16 Tank Status: CURRENTL	Tank ID: 001 Capacity: 4,000 Product: GASOLINE/G	
Facility ID: 3011911 Age: 16 Tank Status: CURRENTL	Tank ID: 002 Capacity: 4,000 Product: GASOLINE/G	
Facility ID: 3011911 Age: 16 Tank Status: CURRENTL	Tank ID: 003 Capacity: 4,000 Product: GASOLINE/G	
Facility ID: 3011911 Age: 16 Tank Status: CURRENTL	Tank ID: 004 Capacity: 4,000 Product: GASOLINE/G	
MICROWAVE STA DAMASCUS ASQNJ-DEH FORT RITCHIE, MD 21719	FINDS	1000524102 MDD985393164
HIGHFIELD ARMORY, ROUTE 01, BOX 248 HIGHFIELD, MD 21719	UST	U001550581 N/A
UST: Facility ID: 3011898 Age: 38 Tank Status: CURRENTL	Tank ID: 001 Capacity: 1,000 Product: GASOLINE/G	
Facility ID: 3011898 Age: 21 Tank Status: CURRENTL	Tank ID: 002 Capacity: 4,000 Product: DIESEL	

DETAILED ORPHAN LISTING

Site	Database(s)	EDR ID Number EPA ID Number
HIGHFIELD ARMORY. (Continued)		U001550581
Facility ID: 3011898 Age: 18 Tank Status: CURRENTL	Tank ID: 003 Capacity: 1000 Product: HEATING OI	
SABILLASVILLE ELEMENTARY SCH 16210B SABILLASVILLE RD SABILLASVILLE, MD 21780	FINDS	1000945400 MD0000753889
VICTOR CULLEN SCHOOL-MES SABILLASVILLE ROAD FRDERICK COUNTY SABILLASVILLE, MD 21780	FINDS	1000525071 MDD985403781
Other Pertinent Environmental Activity Identified at Site: facility has active water discharge permits		
TRANS SUPPLY CO RTE 16 GREENCASTLE ST WASHINGTON, PA 17268	FINDS CERC-NFRAP	1000319539 PAD980832489
CERCLIS-NFRAP Classification Data: Site Incident Category: Not reported Ownership Status: OTHER EPA Notes: Not reported CERCLIS-NFRAP Assessment History: Assessment: DISCOVERY Assessment: PRELIMINARY ASSESSMENT Assessment: SCREENING SITE INSPECTION CERCLIS-NFRAP Site Status: EPA has conducted a preliminary assessment on this site and has determined that no further action is necessary and no hazard was identified CERCLIS-NFRAP Alias Name(s): ZULLINGER QUARRY		
RESH ROAD II WASHINGTON COUNTY, MD	SWF/LF	S101273974 N/A
LF: Facility ID: 90-12-13-02A	Facility Status: Not reported	
WAYNESBORO MOBIL RT 316S WAYNESBORO, PA 17268	LUST	S101475258 N/A
LUST: Not Reported		
WASHINGTON TWP.M.A/D.& A.MILLER FAR ROUTE 4 WAYNESBORO, PA 17268	SWF/LF	S101101267 N/A
Landfill Facility ID: 603261 Last Inspection Date: 07/27/94 Facility Type: RESIDENTIAL SUR APP Operational Status: GOVERNMENT		

DETAILED ORPHAN LISTING

Site	Database(s)	EDR ID Number EPA ID Number			
<hr/>					
WASHINGTON TWP.M.A/D.& A.MILLER FAR (Continued)		S101101267			
GREEN RIDGE UTILITY CO/GLENN RTE 5 WAYNESBORO, PA 17268	FINDS	1000965554 PA0000566687			
<hr/>					
DELPS PATTERN WORKS RTE 991 WAYNESBORO, PA 17268	RCRIS-SQG FINDS	1000349792 PAD000427237			
<hr/>					
RCRIS: Not Reported					
<hr/>					
WASHINGTON TWP.MA/WATSON STONER FAR ANTHONY HIWAY RT 997 WAYNESBORO, PA 17268	SWF/LF	S101101266 N/A			
<hr/>					
Landfill Facility ID: 601862 Last Inspection Date: 07/18/90 Facility Type: RESIDENTIAL SUR APP Operational Status: GOVERNMENT					
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WASHINGTON TWP.A./A.BAUMGARDNER FAR LYONS ROAD T-363 WAYNESBORO, PA 17268	SWF/LF	S101101265 N/A			
<hr/>					
Landfill Facility ID: 601860 Last Inspection Date: Not reported Facility Type: RESIDENTIAL SUR APP Operational Status: GOVERNMENT					
<hr/>					
ALL STAR BODY SHOP S POTOMAC ST SUITE 2 WAYNESBORO, PA 17268	RCRIS-SQG FINDS	1000132597 PAD981945850			
<hr/>					
RCRIS: Owner: ALL STAR BODY SHOP (215) 555-1212 Contact: BILL VALENTINE (717) 762-1221					
Waste	Quantity	Info Source	Waste	Quantity	Info Source
D000	Not reported	Notification	D001	Not reported	Notification
F003	Not reported	Notification	F005	Not reported	Notification
<hr/>					
S POTOMAC LUMBER CO REAR 246 S POTOMAC S WAYNESBORO, PA 17268	FINDS	1000566793 PAD987298676			
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Other Pertinent Environmental Activity Identified at Site: facility has an emission permit under the Clean Air Act					

DETAILED ORPHAN LISTING

Site	Database(s)	EDR ID Number EPA ID Number
S POTOMAC LUMBER CO (Continued)		1000566793
NL IND INC MAGNUS CO INC	FINDS	1000255838
7TH & RINGGOLD STS	CERC-NFRAP	PAD980538946
WAYNESBORO, PA 17268		
CERCLIS-NFRAP Classification Data:		
Site Incident Category: Not reported	Federal Facility: NO	
Ownership Status: OTHER	NPL Status: NOT ON NPL	
EPA Notes: Not reported		
CERCLIS-NFRAP Assessment History:		
Assessment: DISCOVERY	Completed: 06/01/81	
Assessment: PRELIMINARY ASSESSMENT	Completed: 06/08/87	
CERCLIS-NFRAP Site Status:		
EPA has conducted a preliminary assessment on this site and has determined that no further action is necessary and no hazard was identified		
CERCLIS-NFRAP Alias Names: Not Reported		

PRICE DENTAL LABORATORY	RCRIS-SQG	1000168327
209 WAYNE BUILDING	FINDS	PAD081626202
WAYNESBORO, PA 17268		
RCRIS: Not Reported		

BEARTOWN AUTO BODY	RCRIS-SQG	1000370280
11107 WOOD LN	FINDS	PAD982679607
WAYNESBORO, PA 17268		

RCRIS:
 Owner: SITES HARMON F
 (215) 555-1212
 Contact: MITCHA FELLOWS
 (717) 762-4965

Waste	Quantity	Info Source
D000	Not reported	Notification
F003	Not reported	Notification

Waste	Quantity	Info Source
D001	Not reported	Notification
F005	Not reported	Notification

EPA Waste Codes Addendum

Code	Description
D000	NOT DEFINED
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D003	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
D008	LEAD
F001	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

GEOCHECK VERSION 2.1 SUMMARY

FEDERAL DATABASE WELL INFORMATION

MAP ID	WELL ID
1	394305077302201
2	394303077301601
3	394303077300801
4	394300077303001
5	394300077301701
7	394258077302601
8	394256077302901
15	394244077294101
17	394232077301301
18	394230077313801
21	394210077291101
23	394202077282601
24	394143077290501
25	394140077291501
26	394129077292801
27	394121077302501
28	394120077293201
29	394112077303701

STATE DATABASE WELL INFORMATION

MAP ID	WELL NAME
6	Penrsvl Rd
9	Highfield2
10	F Ritchie8
11	Highfield3
10	F Ritchie7
12	F Ritchie4
13	F Ritchie6
14	F Ritchie5
16	Tank Well
19	F Ritchie2

PUBLIC WATER SUPPLY SYSTEM INFORMATION (EPA-FRDS)

Map ID: 1
PWS ID: MD1211058
PWS Name: PEN MAR PK.
PEN MAR, MD

Well currently has or has had major violation(s): No

AREA RADON INFORMATION

Zip Code: 21719

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.300 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.800 pCi/L	100%	0%	0%

GEOCHECK VERSION 2.1 ADDENDUM FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394305077302201	Map ID:	1
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1973	County:	Washington
Altitude:	1330.00 ft.	State:	Maryland
Well Depth:	382.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	200.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11021973	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394303077301601	Map ID:	2
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1975	County:	Washington
Altitude:	1370.00 ft.	State:	Maryland
Well Depth:	245.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	115.63 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05271986	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394303077300801	Map ID:	3
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1983	County:	Washington
Altitude:	1385.00 ft.	State:	Maryland
Well Depth:	500.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	30.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08101983	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394300077303001	Map ID:	4
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1976	County:	Washington
Altitude:	1275.00 ft.	State:	Maryland
Well Depth:	405.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	35.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	02271976	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394300077301701	Map ID:	5
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1978	County:	Washington
Altitude:	1370.00 ft.	State:	Maryland
Well Depth:	400.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	96.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11201978	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394258077302601	Map ID:	7
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1973	County:	Washington
Altitude:	1310.00 ft.	State:	Maryland
Well Depth:	175.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	60.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	10131973	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394256077302901	Map ID:	8
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1976	County:	Washington
Altitude:	690.00 ft.	State:	Maryland
Well Depth:	125.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	35.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11181976	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394244077294101	Map ID:	15
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1978	County:	Washington
Altitude:	1310.00 ft.	State:	Maryland
Well Depth:	150.00 ft.	Topographic Setting:	Valley flat
Depth to Water Table:	6.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08301978	Prim. Use of Water:	Commercial

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394232077301301	Map ID:	17
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1959	County:	Washington
Altitude:	1440.00 ft.	State:	Maryland
Well Depth:	254.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	75.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11161959	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394230077313801	Map ID:	18
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1983	County:	Washington
Altitude:	1000.00 ft.	State:	Maryland
Well Depth:	200.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	60.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	07221983	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cambrian-Lower
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394210077291101	Map ID:	21
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Frederick
Altitude:	1580.00 ft.	State:	Maryland
Well Depth:	216.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Institution

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394202077282601	Map ID:	23
Site Type:	Spring		
Year Constructed:	Not Reported	County:	Frederick
Altitude:	1350.00 ft.	State:	Maryland
Well Depth:	Not Reported	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Not Reported
Date Measured:	Not Reported	Prim. Use of Water:	Institution

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394143077290501	Map ID:	24
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	Frederick
Altitude:	1560.00 ft.	State:	Maryland
Well Depth:	70.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	18.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08081956	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394140077291501	Map ID:	25
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1979	County:	Frederick
Altitude:	1570.00 ft.	State:	Maryland
Well Depth:	250.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	10.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	09081979	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394129077292801	Map ID:	26
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	Frederick
Altitude:	1585.00 ft.	State:	Maryland
Well Depth:	45.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	18.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11231956	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394121077302501	Map ID:	27
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1978	County:	Washington
Altitude:	1610.00 ft.	State:	Maryland
Well Depth:	97.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	18.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	06301978	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394120077293201	Map ID:	28
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1973	County:	Frederick
Altitude:	1560.00 ft.	State:	Maryland
Well Depth:	102.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	45.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11201973	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

BASIC WELL DATA

Site ID:	394112077303701	Map ID:	29
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1980	County:	Washington
Altitude:	1665.00 ft.	State:	Maryland
Well Depth:	225.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	35.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08011980	Prim. Use of Water:	Domestic

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Precambrian
Principal Lithology of Unit:	Not Reported
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Water Well Information:

Map ID: 6
Site Name: HIGHFIELD
Public Water Sys. ID: 0210001
NAD 27 Northing Coordinate: 686200
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: Penrsvl Rd
Total Depth: 0
NAD 27 Easting Coordinate: 662500
Case Depth: 0
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 9
Site Name: HIGHFIELD
Public Water Sys. ID: 0210001
NAD 27 Northing Coordinate: 685500
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: Highfield2
Total Depth: 0
NAD 27 Easting Coordinate: 664000
Case Depth: 0
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 10
Site Name: FORT RITCHIE
Public Water Sys. ID: 0210007
NAD 27 Northing Coordinate: 685400
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: F Ritchie8
Total Depth: 0
NAD 27 Easting Coordinate: 663000
Case Depth: 0
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 11
Site Name: HIGHFIELD
Public Water Sys. ID: 0210001
NAD 27 Northing Coordinate: 685300
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: Highfield3
Total Depth: 0
NAD 27 Easting Coordinate: 664500
Case Depth: 0
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Map ID: 10
Site Name: FORT RITCHIE
Public Water Sys. ID: 0210007
NAD 27 Northing Coordinate: 685200
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: F Ritchie7
Total Depth: 187
NAD 27 Easting Coordinate: 662800
Case Depth: 35
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 12
Site Name: FORT RITCHIE
Public Water Sys. ID: 0210007
NAD 27 Northing Coordinate: 685200
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: F Ritchie4
Total Depth: 200
NAD 27 Easting Coordinate: 660600
Case Depth: 43
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 13
Site Name: FORT RITCHIE
Public Water Sys. ID: 0210007
NAD 27 Northing Coordinate: 685000
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: F Ritchie6
Total Depth: 200
NAD 27 Easting Coordinate: 662500
Case Depth: 25
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 14
Site Name: FORT RITCHIE
Public Water Sys. ID: 0210007
NAD 27 Northing Coordinate: 684800
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: F Ritchie5
Total Depth: 191
NAD 27 Easting Coordinate: 662200
Case Depth: 41
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

Map ID: 16
Site Name: HIGHFIELD
Public Water Sys. ID: 0210001
NAD 27 Northing Coordinate: 684500
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: Tank Well
Total Depth: 0
NAD 27 Easting Coordinate: 666000
Case Depth: 0
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Map ID: 19
Site Name: FORT RITCHIE
Public Water Sys. ID: 0210007
NAD 27 Northing Coordinate: 683000
Aquifer Type: Unconfined
Depth to Top of 1st Screen: Not Reported
Depth to Top of 2nd Screen: Not Reported
Depth to Top of 3rd Screen: Not Reported

Well Name: F Ritchie2
Total Depth: 300
NAD 27 Easting Coordinate: 660000
Case Depth: 9
Depth to bot. of 1st Screen: Not Reported
Depth to bot. of 2nd Screen: Not Reported
Depth to bot. of 3rd Screen: Not Reported

GEOCHECK VERSION 2.1
PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

PWS ID:	MD1211058	PWS Status:	Active	Map ID:	1
		Date Initiated:	Not Reported	Date Deactivated:	Not Reported

PWS Name: PEN MAR PK.
PEN MAR, MD

Addressee / Facility Type: System Owner/Responsible Party
Facility Name: PEN MAR PK.
PEN MAR, MD

Facility Latitude:	39 43 04	Facility Longitude:	077 30 24
City Served:	Not Reported:		
Treatment Class:	Untreated	Population Served:	Under 101 Persons

Well currently has or has had major violation(s): No

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MEMORANDUM

TO: Fort Ritchie Project File
FROM: Claudia A. Brand
DATE: September 18, 1995
RE: Summary of Interview with Mr. Paul Mummert (former employee) and Mr. Bill Hofmann Conducted on September 15, 1995

General

Mr. Mummert was employed at the Ft. Ritchie base from 1964 to September 1994.

His primary job was as a pest controller, and as such he reports that he has been in or around just about every building on the base. Also, he would investigate dump sites because of the pest problems. Initially, he worked under Ken Willard who also had extensive knowledge of the base having worked there since 1923.

Prior to being employed on base, Mr. Mummert reports that he had been on base often with this father and had helped out on the rifle ranges in the late 30s.

Incinerator Practices

Mr. Mummert was not directly involved in incinerator operations, however, he believes the original stone incinerator operated from when it was built in the early 1930s (through the 1940s?). It probably burned any type of trash, and ash was probably shoveled out and removed by trucks. But, he suggested talking with Mr. Tom Olsen (his former supervisor) for specifics and ash disposal info.

The newer incinerator reportedly operated from 1952 to 1975, and again would have received any type of waste generated at the base. In the early 1970s, the army installed one of the first air scrubber systems on the plant and it never operated well, so they eventually they switched to contract waste disposal.

Suggested Tom Olsen may know what was the source of the fuel for startup? how much? stored where? and where was ash disposed?

Wastewater Treatment Plant

To the best of his knowledge, *the sludge from the WWTP was pumped directly into tank trucks that hauled the waste off-site for use on nearby farmland.* Occasionally, when for example the sludge was too wet, he thought it may have been hauled to an off-site landfill instead, but it was not disposed on site.

Stormwater Management

All stormwater always drained to the on-site lakes, and over the years they had numerous problems with sheens on the water (and an occasional fish kill) from small incidents such as someone changing their oil in the housing area. However, *Mr. Mummert did not believe the lake sediments would contain significant residue* because the upper lake was recently dredged to remove 6 ft of bottom sediments, and the lower lake is currently being worked on.

PCBs

Mr. Mummert did not have any direct knowledge of the PCB cleanup in Building 160 or other buildings. However, he recalled that *PCB transformers were probably stored in the 900 Area in the 1980s* and have

since been removed. The storage location of the suspect transformers is the same general areas as where ICF staff observed transformers during their recent base visit (i.e., in front/west of the newer incinerator building and on the north side of the storage shed building). In addition, Mr. Mummert indicated that *miscellaneous storage of transformers and possibly other chemical may have occurred outside the NE corner of the incinerator building (No. 908) at the base of the hill.*

USTs

Mr. Mummert observed the UST removals in passing, but was not personally involved in the procedures.

Nearby Properties

Most of the businesses in the area were located across from the east main gate.

The dry cleaners in what is now the trailer park area, did dry cleaning on the premises (as opposed to sending it off-site). There was also an old gas station on Rte 550, across the road from the existing station. He had no other knowledge of any chemical use, car repair, spills/fires, dumps, etc.

Mr. Bill Hofmann recalled a fuel oil tank overfill at a residence near the base in 1990 or 1991, and the base fire department responded to the incident because of its proximity to the NE water supply wells. The spill was apparently cleaned up to the satisfaction of the fire department and no further response action was taken.

Wells/Water Use

Occasionally had short supply. No further info.

UXO

No personal knowledge. Bob Sweeney in Waynesboro is possible contact.

Building and Area Summary

Old Service station at No. 605 -- was used prior to W.W.II. He did not have personal knowledge of operations and tanks.

Existing Gas Station at No. 515 -- Noted that there was at one time an underground waste oil tank (status?) on the premises when more auto maintenance done on-site. Didn't observe or have any involvement in spill cleanup.

Maintenance Buildings -- Storage of drums of chemicals occurred in the same general location as current drum storage area between 601 and 602. The area was an open shed and has always been paved. From around W.W.II to 1952, *pesticides were also stored in this area. At that time, the base was using a lot of DDT and Chlordane.*

Additionally, a lot of paints and batteries were stored in the E side of building 602 where some storage was observed by ICF. Also, paint storage and brush cleaning was conducted in N corner of 601 near carpenter shop.

Generally, chemical storage occurred in drums and small containers, as opposed to tanks. No reports of significant spills upon delivery or during use.

700 Area -- Originally, the entire east side of the lot was fenced and was used for drum storage. Also, the SE side of the lot was used for equipment storage along the fence line, including pesticide application equipment. Cleaning of various equipment also occurred at the wash rack in the 700 area.

900 Area -- (see previous discussion of incinerators and PCBs.) This area was used continuously as a temporary storage yard (dump site) for equipment and miscellaneous items before going off-site. Again, Mr. Mummert recommended sampling around the concrete slab outside the NE corner, at the base of the incinerator building (for constituents such as PCBs and petroleum products, battery acids, lead, etc.)

Motor Pool No. 700 -- Probably had the greatest opportunity for spills during routine operations which included vehicle painting, oil storage, truck washing, maintenance and battery storage. At one time the area flooded. Occasional dumping occurred on SW hillside, mostly tires and miscellaneous debris as observed by ICF staff, also batteries. The shed on E side that was removed contained Shell oil drums.

Robert Miller was the supervisor of building 700.

Old Gas Station at 716 -- tanks were located on S side of building. Some oil storage occurred in that area. *Tank status?*

Autocraft/Building 401 -- Confirmed that the *E side of building always looked stained* from oil storage due to the vehicle work that occurred in that area.

Since 1952, pesticide storage has been in lower level of 401. Mr. Mummert developed current setup and it is typical of how things operated, e.g. chemicals received in 5 gallon containers or 25 lb bags (not bulk). mixing took place inside or at location of application (not outside of building 401) Over the years, they have eliminated a lot of the different types of chemicals *used basewide, such as diazanon, chlordane and DDT* which was used a lot in the past.

PhotoLab (No. 301) -- Chemical storage of fixers etc. always occurred in the shed that was removed on side of building. No observation of spills or leaks. Noted that another photo lab was located in *Building 305* at one time.

Former Building 833 -- *Building was demolished, but it was the former location of herbicide storage for the golf course. Mr. Mummert believes it would be a possible area to sample for a release. New info.*

Firestation -- Was the only place on base besides Motor Pool and 700 area where vehicle washing was allowed. But, fluids and maintenance occurred at Building 700.

Firing Ranges -- There were several ranges on the base and inside buildings. Building 504 was the range house and had training in basement. The *200-yd. range* was setup at 504 with shooting into the hillside where housing is now located. The *artillery range* was setup so firing went into the hillside where UXOs have been identified. And the *1,000-yd range* was set up also from Building 504 shooting to the west, again into what is now housing. Mr. Mummert indicated he would not expect there to be chemicals of concern at 504 (bullets in basement possible) although *UXOs on hillside and in housing (?) could be possible.*

Skeet Range -- Was used for 20 years. Shot into the mountain. Ask Phil Marne about cleanup. Investigation is being conducted by USACHPPM and they have sampled 450 ft from source and *still not*

defined limits of lead in soils, according to Bill Hofmann. Reports available with sampling and analysis details.

Substation -- is owned and operated by Potomac Edison, never been responsibility of base.

Range Road Dumping -- Periodic dumping of miscellaneous debris occurred along Range Rd. extending from where the telephone poles are stored in the north to where the road levels off (before descending to the reservoir) to the south. The extent of dumping was the level area only, i.e., it would not have continued over the hillside. Types of debris unknown. Tires and construction debris typical, but potential for paint cans or petroleum waste unknown.

Wetland -- Occasionally found concrete slab or appliance dumped on NE side, but nothing of significance.

Golf Course -- Built in 1960s. Applied fungicides only. Check with Donna Taylor for type and Tommy Coon on storage practices. Applied on an as needed basis only.

Wise Rd. Dump -- *Mr. Mummert identified an area along south boundary of property, on Wise Rd. where a former dump was located. Miscellaneous debris disposed over time there, primarily household debris, but probably worth checking further. New info.*

MEMORANDUM

TO: Fort Ritchie Project File
FROM: Claudia A. Brand
DATE: October 20, 1995
RE: Summary of Interview with Mr. Thomas Olsen (former employee) Conducted October 19, 1995

General

Mr. Olsen was employed at the Ft. Ritchie base from 1952 to 1985.

Between 1952 and 1970, he worked in the Sanitation Dept., then from 1970-1985 he was the Maintenance Supervisor.

Solid Waste Management/Incinerator Practices

According to Mr. Olsen, the original stone incinerator was built by the National Guard sometime in the 1930s. The solid waste from throughout the base was hauled directly to this incinerator for disposal until the late 1940s. The solid waste reportedly consisted of typical office and household refuse (paper, food, etc.), although small quantities of miscellaneous chemicals (household, oils, empty paint cans, etc.) would also have been burned in the incinerator. There was no staging area for the refuse, it was deposited directly in the incinerator. There was no startup fuel (pre-burner) used on the incinerator. *The ash from the incinerator was deposited in two landfill areas on Wise Road. (See the attached figure.)* Mr. Olsen reported that the ash was covered with soil on a routine basis in these landfills.

Around 1950, the new incinerator was constructed, and until 1970, solid waste management practices remained generally the same. Wastes were hauled directly to the new incinerator for burning. To the best of Mr. Olsen's recollection, this incinerator was equipped with an oil pre-burner; however, he believes the oil was stored in a 275-gallon aboveground tank (and does not think there was ever an UST used in association with the incinerator).

In the 1970s, the new incinerator was retrofitted with an air pollution control device (air scrubber?) which was one of the first of its kinds and reportedly did not operate very well. As a result, the Army stopped using the incinerator after about 2 months and switched to using a contracted solid waste collection and disposal service.

Wastewater Treatment Plant

Mr. Olsen could only recollect one time that the sludge from the WWTP was placed on the base. Apparently, during WWII, some dried sludge was placed down when the parade field was being regraded. Otherwise, Mr. Olsen confirmed that the sludge was hauled offsite to farms. He did, however, indicate that dewatering beds located in Area B were used prior to sending the sludge off base (but this area has already been transferred to the County).

PCBs, USTs, Lead-Based Paint, Asbestos, Stormwater

Mr. Olsen did not have any experience or recollections pertaining to these issues.

Nearby Properties

Mr. Olsen did not recall any incidents such as fires, spills, dumping or offsite operations that used hazardous chemicals for the properties surrounding the base (other than the dry cleaner that operated for about 10 years across from the main gate).

Water Use

Mr. Olsen visited the reservoirs and wells daily to check conditions and add water treatment chemicals. The water treatment chemicals included soda ash, fluoride, and chlorine which were added directly to certain wells. These chemicals were stored in a small building in the 900 area. The Water Treatment building was only used to treat the lake water in emergency situations, and Mr. Olsen estimated that it was used perhaps a total of 6 months during his tenure at the base. And again, the water treatment chemicals were not stored in the building but rather in the 900 area. Mr. Olsen reported that he was not aware of any spills of the water treatment chemicals.

UXO

No personal knowledge of UXO issues.

Building and Area Summary

Old Service station at No. 605 -- already stopped use of it by time he got there (Paul Mummert believed it was used prior to WWII). He did not have personal knowledge of operations and tanks.

Existing Gas Station at No. 515 -- Didn't observe or have any involvement in spill cleanup.

Maintenance Buildings -- Confirmed that storage of drums of chemicals occurred in the same general location as current drum storage area between 601 and 602. The area was an open shed and has always been paved. Additionally, confirmed that paints were stored in the E side of building 602 where some storage was observed by ICF.

Generally, chemical storage occurred in drums and small containers, as opposed to tanks. Only materials in drums would have been oils, antifreeze, and occasionally weed control chemical applied to lakes. No reports of significant spills of chemicals upon delivery or during use. No fires, dumping, exposure complaints or other problems identified.

700 Area -- Confirmed that east side of lot was where most of storage occurred. Roads and Grounds crew used the area (so Tom Gilbert may have more details).

900 Area -- (see previous discussion of incinerators and water.) Confirmed that this area was used continuously as a temporary storage yard for equipment and miscellaneous items before going offsite. Not aware of any dumping, spills, fires, tanks, or other issues of concern.

Motor Pool No. 700 -- Probably had the greatest opportunity for spills during routine operations which included vehicle painting, oil storage, truck washing, maintenance and battery storage. At one time the area flooded. Occasional dumping occurred on SW hillside, mostly tires and miscellaneous debris as observed by ICF staff, also batteries. The shed on E side that was removed contained Shell oil drums.

Robert Miller was the supervisor of building 700.

Old Gas Station at 716 -- no info. Some vehicle washing occurred there at one time.

Autocraft/Building 401 -- No info on Autocraft other than what has already been reported or observed.

Since 1952, pesticide storage has been in lower level of 401 under Mr. Mummert. No recollection of spills, fires, outdoor mixing, or other incidents that would have caused a release

PhotoLab (No. 301) -- No personal knowledge of conditions.

Former Bldg 833 --. No personal knowledge of conditions.

Firestation -- No personal knowledge of conditions

Firing Ranges -- Mr. Olsen confirmed that there were several ranges on the base and inside buildings.

The 100 yd and 200-yd ranges shot from around Building 508 (or 504?) northward. The ranges used No. 22s so some lead may be present.

There was a pistol range in the location that is now the Motor Pool.

The 1,000-yd range was setup near Bldg 500 and they shot westerly into the hillside. Here they used 30-06 rifles, and the shot would be mostly brass (no lead to speak of.)

Skeet Range -- No personal knowledge of the skeet range.

Substation -- No personal knowledge.

Range Road Dumping -- Mr. Olsen traveled Range Rd daily from 1952-1970 to go the million gallon reservoir. *He does not recall seeing any dumping of debris along the road during that time.* The only two incidents he noted were occasional dumping of leaves and some soils that were dredged from the upper lake one time.

Wetland -- No personal knowledge.

Golf Course -- No personal knowledge.

Wise Rd. Dump -- Mr. Olsen confirmed that there were 2 locations on Wise Road that were used for dumping through the years. (See previous discussion of solid waste.)

MEMORANDUM

TO: Fort Ritchie Project File
FROM: Claudia A. Brand
DATE: October 24, 1995
RE: Summary of Interview with Mr. Thomas Gilbert (former employee) Conducted October 24, 1995
(by telephone)

General

Mr. Gilbert was employed at the Ft. Ritchie base from 1972 to 1995.

Between 1972-1986, he worked as a heavy equipment operator for Colejon, and afterwards until 1995, he was the Roads and Grounds foreman for the base. His responsibilities in these positions included excavation activities for all construction and demolition projects including water and sewer line installations as well as refuse collection after '86.

Solid Waste Management/900 Area

According to Mr. Gilbert, Ft. Ritchie's solid waste was hauled offsite to the Washington Township Municipal Transfer station during the years he was employed at the base. He was involved in periodically cleaning out the dumpsters (approximately 2-5 dumpsters per week) at the washracks located near the incinerator building in the 900 area. The wash process involved using a high pressure cleaner on a concrete pad (near the front of the building) that was equipped with a grease trap. Mr. Gilbert did not recall observing paints or oils in the dumpsters that would have been mixed in with the washwater. As a result, he believes there is only a minor risk that a release occurred from this operation. However, he noted that this is also the location where the dumpsters were painted, and therefore sampling may be a good idea.

According to Mr. Gilbert, batteries and lead paints were stored inside the incinerator building directly on the floor, near the front of the building. He did not, however, observe any indications of staining or a release in this area.

Mr. Gilbert suggested that sampling may be needed in the vicinity of the transformer storage area, outside (in the front) of the incinerator building. He had not observed evidence of a release, but noted that PCB-contaminated transformers were stored there during the removal process, and though leaking units were placed in barrels, he could not be sure a release had not occurred.

The small storage building across from the incinerator is not an area of concern according to Mr. Gilbert. It was only used for storage of soaps and miscellaneous items.

PCBs, Wastewater Treatment Plant, Lead-Based Paint, Asbestos, Water Use

Mr. Gilbert did not have any experience or recollections pertaining to these issues.

Nearby Properties

Mr. Gilbert did not recall any incidents such as fires, spills, dumping or offsite operations that used hazardous chemicals for the properties surrounding the base.

USTs

As both heavy equipment operator and Rds & Grounds foreman, Mr. Gilbert was very involved in the underground storage tank removals at the base (with the exceptions of those at the service station which

were removed by a contractor, Sam Spiegler, out of Hagerstown). In general, he reported that it was an ongoing operation of removal and replacement at a rate of about 10 tanks per year (mostly in housing) between 1986 and 1994 (before basewide removals occurred). He estimates he was involved with about 90% of the removals during this time.

According to Mr. Gilbert, between 1986-1993 or 1994, the base DPW would indicate the need for changing a tank based on its age or weekly dip stick measurements (i.e., if tank had fast decrease in oil or too much water) usually in housing. Originally, single-walled steel tanks were installed, and when replacement was needed, Ft. Ritchie bought double-walled fiberglass 500 gallon fuel tanks. Mr. Gilbert would go to designated building with three men (one equip operator) and start by pumping oil tanks out (transferred oil to a tank that was still in use). Tank holes would be plugged, then it would be excavated and placed on plastic surrounded by straw bales. Average excavation was about 5-8 ft. deep 4 ft wide. Soils consisted of sands and clay. (Tanks in the ground sat on concrete pads.) Tank taken up to Range Rd (on left side of road after salt storage, past telephone storage, after road goes off base and comes back on) where contractor Gerald Taylor would pump out sludge residue. No releases on Range Rd. to speak of. For the new tanks, they used pea stone as fill and installed 2 monitoring wells for leak detection. Pressure tested all new tanks and did not have any incidents of loose valves or releases after installation.

If contamination was found in an excavation, stained soils were removed (based on odor and observation) and placed on plastic. Notified base DPW, and State of MD would come observe excavation usually within a couple hours. Dirt on plastic was hauled up to Range Rd., placed on black plastic surrounded by straw, and allowed to aerate. DL George, Contractor had screening instrument for soils and measured soils periodically, and once he determined it was below an acceptable level, it was reused as fill on the base. *(Suggested Ed Hartzell or Bobby Wiles in DPW may be able to provide information on the screening levels used.) Typically, piles would stay on Range Rd for 3-6 weeks before reuse. Doesn't remember soil ever being pushed over hillside.

Sometime around 1993 or 1994, all of the fuel oil tanks from the housing area were removed. They installed propane gas lines and replaced all oil burning furnaces with gas units. He was not a part of other (non-housing buildings). Never removed any gasoline tanks, that was always contracted out. (Check with Mr. Wiles in DPW.) Overall, he does not think there are any major contamination issues associated with the housing tanks (or elsewhere on base).

UXO

During construction and demolition activities, during excavation for the new commissary and PX in about 1992, D.L George (contractor) came upon UXOs and notified Mr. Gilbert and DPW. Demolition team from Letterkenney Army Depot contacted to collect the ordnances. UXOs were just beneath the top soil (a foot deep) and he estimates 8-inches long (75mm) shells. Encountered about 3-5 shells. He does not recall any other encounter with UXOs (none in playground area of youth center). On hillside where UXOs found, Mr. Gilbert walked whole perimeter of fence (in 1990s), and never observed any UXOs on the surface. Determined location of fence by boundary of base. Suggested checking old maps for exact location of range. Nowadays will count number of explosions and if UXOs exist they go look for them, and he believes this has been standard army procedure or some time (they did in the service in the 40s when he was enlisted).

Building and Area Summary

Old Service Station at No. 605 -- He excavated water lines for new bathroom in that area and they did find a little fuel oil (thick) and they removed what they found. Hole kept filling with water and oil started infiltrating (but would stop on its own) Gerald Taylor came and pumped out. No stained soils found.

Existing Gas Station at No. 515 -- Did inspect excavation in that area on a periodic basis to check activities. Soils were removed and hauled off post immediately. Did not observe any water in excavation, and did not detect odors. No problems during excavation that he can recall.

Maintenance Buildings -- 500-gallon fuel oil tank on wheels was stored in the area between 601 and 602. One time spilled 8-10 gallons but within containment area and cleaned up immediately. Speedi-dry used, and placed in separate bags, and then arrangements made with Washington Township's landfill. No observation of stained soils outside of spill containment area (or inside buildings)

During his time, at the direction of Washington Township, all the paint cans were opened prior to disposal, filled with Speedi-dry, and then placed in a designated area at the Washington facility.

Jim Whitney (Base safety officer) would be another possible person to speak with (Knows of every spill since early 1970s).

700 Area -- Stored and used hydraulic oil, engine oil, sulfuric acid, antifreeze, and solvents in this area. New materials and waste drums stored inside metal shed on the government side. Only empty drums stored outside now. Prior to 1980s, drums were outside and covered with a canvas. If spill occurred inside building, they were contained and fluids given to Gerald Taylor. Currently, parts cleaner is pumped by contractor. In the past, contractor would place all drained oil and solvents in an UST which has since been removed and replaced with new tank (with wells) in the same location. Gerald Taylor was used to pump out the USTs (New tank can only accept oil, drums are used for antifreeze and solvents which are pumped out by contractor.)

Asphalt staining on eastern side of lot is from vehicle repair and construction equipment storage. For example, if hydraulic line breaks (during repair operations) would leave marks. Believes any contamination if present would be minimal and shallow.

900 Area -- He believes this is the only area where outside storage (of transformers) occurred on routine basis. Prior to 1980s, just set on the ground. After that time, those PCBs units suspected of leaking were placed in containers and checked regularly.

Motor Pool No. 700 -- No personal observation in that area.

Old Gas Station at 716 --no info.

Autocraft/Building 401 -- no info.

PhotoLab (No. 301) -- Did a lot of excavation around the building to improve drainage (water was entering building) Never detected odors or observed any contamination around the shed or building itself.

Former Bldg 833 -- No personal knowledge of conditions.

Firestation -- No personal knowledge of conditions.

Firing Ranges & Skeet Range -- No personal knowledge of the ranges.

Substation -- No personal knowledge.

Range Road Dumping -- Mr. Gilbert suggested that Range Road may be an area to further investigate. He observed misc. storage of materials by contractors, tires from all around post (first area on right past

salt storage), and miscellaneous debris over the years. Never observed any oil drums or those types of items. He indicated that most of the activity took place around 1984-1986 when the government switched to use of a contractor for DPW services (confirming the explanation of why Tom Olsen did not observe dumping prior to 1970). Apparently, all of the removed USTs from housing were stored in this area prior to being taken offsite (check with Bill on final destination.).

Wetland -- No personal knowledge.

Golf Course -- No personal knowledge.

Wise Rd. Dump -- Mr. Gilbert did not have any knowledge of these locations.

In general, believes base as a whole is fairly clean.

CERFA LETTER REPORT FORT RITCHIE ARMY GARRISON

EXECUTIVE SUMMARY

This letter report presents the results of the Community Environmental Response Facilitation Act (CERFA) investigation conducted by ICF Kaiser Engineers, Inc., at Fort Ritchie Army Garrison, a U.S. Government property selected for closure in 1995 by the Base Realignment and Closure (BRAC) Commission under Public Laws 100-526 and 101-510. Under CERFA (Public Law 102-426), Federal agencies are required to expeditiously identify real property that can be immediately reused and redeveloped. Satisfying this objective requires the identification of real property where no hazardous substances or petroleum products, regulated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), were stored for 1 year or more, known to have been released, or disposed.

Information in this letter report was obtained during the Environmental Baseline Survey (EBS) of Fort Ritchie and was current as of October 31, 1995. This information was used to divide the installation into seven categories of parcels. These categories, as defined by the Department of Defense BRAC Cleanup Plan (BCP) Guidebook, Fall 1993, are as follows:

Category 1: Areas where no storage, release or disposal (including migration) has occurred.

Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred³ (including no migration of these substances from adjacent areas). This area type is defined as follows: a geographically contiguous and mappable area where the results of investigations show that no hazardous substances or petroleum products were stored, released into the environment or site structures, or disposed of on site property. A determination of this area type cannot be made, however, unless a minimum level of information gathering and assessment has been completed. In accordance with Section 120(h)(4) of CERCLA as amended by CERFA, all such determinations (i.e., "uncontaminated") of this area type must be made on the basis of a **records search** of the area in question and adjacent property, a review of the **chain of title** documents for the area, a review of **aerial photographs** of the area, a **visual inspection** of the area and adjacent property, and **interviews** with current and former employees regarding their knowledge of past and current activities on the property. These efforts are (or can be) functionally accomplished via an EBS (or properly scoped Preliminary Assessment) of the property in question. If information gathered from these efforts indicates that hazardous substances or petroleum products have been released, disposed of, or stored in the area, the geographic location becomes one of the other area types.

Category 2: Areas where only storage has occurred.

Areas where only storage of hazardous substances or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred). This area type is defined as follows: a geographically contiguous and mappable area where the results of

³ Note that the terms "contaminant" and "hazardous substance" used in this section mean all CERCLA hazardous substances (42 U.S.C § 9601(14)) and specifically include petroleum, petroleum products, oil, and lubricants.

investigations show only that storage of hazardous substances or petroleum products has occurred. A determination of this area type must be made in accordance with the same requirements in Section 120(h)(4) of CERCLA, as listed in the above paragraph.

Category 3: Areas of contamination below action levels.

Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action. This area type is defined as follows: a geographically contiguous and mappable area where environmental evidence demonstrates that hazardous substances or petroleum products have been stored, released, or disposed, but are present at concentrations that require no response action to protect human health and the environment. It should be noted that the designation of a Category 3 area cannot be made with confidence unless a minimum level of information gathering and assessment has been completed. As such, all such determinations should be made on the basis of a Site Inspection or equivalent level of effort, which includes biased field sampling and laboratory analysis to support a conceptual understanding of the area.

Category 4: Areas where all remedial actions have been taken.

Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken. This area type is defined as follows: a geographically contiguous and mappable area where all remedial actions necessary to protect human health and the environment have been conducted. Category 4 areas include those areas in which an EBS report documents that hazardous substances are known to have been released or disposed of on the property but all remedial actions necessary to protect human health and the environment with respect to any hazardous substances remaining on the property have already been taken to meet the provisions of CERCLA Section 120(h)(3). Clarification of the meaning of "all remedial action has been taken" is found in Section 12(h)(4)(B)(i) of CERCLA. BRAC Cleanup Teams preparing suitability of property for transfer maps should be aware that "all remedial action has been taken" means that the construction and installation of an approved remedial design has been completed and that the remedy has been demonstrated to EPA to be operating properly and successfully (in practice, usually a year).

Category 5: Areas of known contamination with removal and/or remedial action under way.

Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, removal and/or remedial actions are under way, but all required remedial actions have not yet been taken. This area type is defined as follows: a geographically contiguous and mappable area where the presence of sources or releases of hazardous substances or petroleum products (including derivatives) is confirmed based on the results of sampling and analysis in electronic databases and/or environmental restoration and compliance reports. By definition, this area type contains contaminant concentrations **above action levels**. Such concentrations do not meet the criteria that would allow a determination of a Category 3 area. Remedial systems for Category 5 areas are partially or entirely in place but have not been fully demonstrated.

Category 6: Areas of known contamination where required response actions have not been taken.

Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but required response actions have not yet been implemented. This area type is defined as follows: a geographically contiguous and mappable

area where the presence of sources or releases of hazardous substance or petroleum products (including derivatives) is confirmed based on the results of sampling and analysis as contained in electronic databases and/or environmental restoration and compliance reports. This area type contains concentrations of contaminants **above action levels**. Such concentrations do not meet the criteria that would allow a determination of a Category 3 area. Additionally, required remedial systems have not been selected or implemented.

Category 7: Areas that are not evaluated or that require further evaluation.

Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products is suspected, but are not evaluated or that require further evaluation.

This area type is defined as follows: a geographically contiguous and mappable area where the presence of sources or releases of hazardous substances or petroleum products (including derivatives) is suspected, but not well characterized, based on the results of a properly scoped records search, chain of title review, aerial photography review, visual inspection, set of employee interviews, and possibly sampling and analysis. They do not, with certainty, fit any of the previous area types because evaluation efforts have not occurred, are ongoing, or are inconclusive.

Areas of the facility which contain non-CERCLA related environmental or safety issues, including asbestos, lead based paint, polychlorinated biphenyls (PCBs), radon, unexploded ordnance (UXO), and radionuclides, have also been identified in separate parcels.

This letter report contains maps that summarize the categorization of Fort Ritchie on the basis of the above definitions. This report should be read only in conjunction with the complete EBS report for this installation. The EBS report provides the relevant environmental history to substantiate the parcel categorization. This letter report does not address other property transfer requirements that may be applicable under the National Environmental Policy Act, nor does it address natural resource considerations such as the threat to plant or animal life.

**ACREAGE SUMMARY TABLE
CERCLA ISSUES**

Category	Acreage
1	342.3
2	126.56
3	0.0
4	18.51
5	0.0
6	0.0
7	143.85

**ACREAGE SUMMARY TABLE
NON-CERCLA ISSUES**

Non CERCLA Issue	Acreage
Asbestos	129.35
Lead-Based Paint	129.35
PCBs	0.2
Radon	6.0
Possible Unexploded Ordnance	436.17
Radionuclides	0.0
None	132.0

CERFA MAP

The CERFA map for the Fort Ritchie property is presented in Figure J-1. The map is overlaid by a grid of one acre unit increments. The grid uses a coordinate system with numbers on the x and y axes. Parcel boundaries are drawn along the estimated extent of contamination. There are no estimated buffer zones included in determining the parcel boundary extent. UST locations are delineated by a dot. Parcels are colored according to the BRAC Cleanup Plan Guidebook, Section 4.10, as follows:

<u>Category</u>	<u>Color</u>
1	White
2	Blue
3	Light Green
4	Dark Green
5	Yellow
6	Red
7	Gray

Each parcel is given a unique parcel label which is connected to the parcel boundary by a line. These labels consist of a unique parcel identification number, category number, and contamination description. Contamination is described by the following designations:

HR	Hazardous Release or/and Disposal
HS	Hazardous Storage
PR	Petroleum Release or/and Disposal
PS	Petroleum Storage

For example, the tenth parcel, which is an area where storage of hazardous materials and storage and release of petroleum products is suspected to have occurred but has not been evaluated, is labelled as 10(7)HS/PS/PR.

Table J-1 describes the CERFA Parcel Map in more detail. The table contains the following nine columns:

Parcel Label: Under this column, the parcel label as previously defined is listed in consecutive order according to the parcel number.

Category: The appropriate category of each parcel is stated under the Category column using numbers 1 through 7.

Location Coordinate: The parcel location is identified using the x and y coordinates for the point near where the label line intersects the parcel boundary on the CERFA Parcel map.

Size: The estimated acreage for each parcel is presented in this column. The total parcel acreages equal the total acreage for the Fort Ritchie property.

Description: This column describes the facilities contained within each parcel.

Basis: This column contains a brief rationale for the parcel category and all other reasons that contribute to the parcel label.

Source of Evidence: This column lists the information source justifying the parcel category and all other information provided under the "Basis" column using the reference numbers as they appear in Appendix A of the EBS report.

Reference: The EBS page and section number which provides additional information on the parcel are listed in this column.

Remediation or Mitigation: This column briefly describes the remedial activity which is completed, underway, or planned for categories 4, 5 and 6.

MAP FOR NON-CERCLA ISSUES

Areas containing non-CERCLA related environmental or safety issues are delineated separately and labelled by the letter Q for "qualified" as shown in Figure J-2. The non-CERCLA related issues and their designations are as follows:

- A = Asbestos
- L = Lead-Based Paint
- P = Polychlorinated Biphenyls (PCBs)
- R = Radon
- X = Unexploded Ordnance (UXO)
- RD = Radionuclides

The boundaries for Non-CERCLA issue qualified parcels overlap all Category 1-7 parcels. These parcels are labelled with a unique parcel identification number. Where the non-CERCLA concern is possible, but unverified by sampling and analysis, a (P) is added to the label. For example, the fourteenth parcel which has lead-based paint, asbestos, and unexploded ordnance is labelled as 14Q-L/A/(P)X. Non-CERCLA issue qualified parcels are not designated in colors so that the background color of the applicable category is discernible. Table J-2 describes the non-CERCLA Parcel Map in more detail. The table contains all nine columns presented in Table J-1 with the exception of the Category column.

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Table J-1
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDIAION OR MITIGATION
1(1)	1	5,9	43.7	Reserved Land/Buffer	No evidence that hazardous substances or petroleum products have been stored, released, or disposed in this area.	NA.	3-1,3-10,3-11	NA.
2(7)HR/PR	7	10,11	80.8	Wetland Area	Potential migration of hazardous substances or petroleum products to the wetland from adjacent waste disposal sites and the former skeet range.	25,26.	3-12,4-8	None.
				Reservoir Road Disposal Area	Reported dumping of miscellaneous waste material which may include hazardous substances and petroleum products. Stressed vegetation.	14,19,25,26.	3-6,3-7,4-8 App H	None.
				Wise Road Disposal Area	Reported dumping of miscellaneous waste material which may include incinerator ash, hazardous substances, and petroleum products.	25,26.	3-6,3-7,4-7 App H	None.

a	=	On Figure J-1	c	EBS Page
b	=	From Appendix A	NA	Not Applicable
				J-6

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
2(7)HR/PR	7	10,11	80.8	Ritchie Road Disposal Area	Reported dumping of miscellaneous waste material which may include incinerator ash, hazardous substances, and petroleum products.	25,26.	3-6,3-7,4-8 App H	None.
3(1)	1	15,27	250.8	Unexploded Ordnance Impact Area	No evidence that hazardous substances or petroleum products have been stored, released or disposed in this area.	2,19,34,35, 69.	2-4,2-10,3-1, 4-8,4-13	NA.
4(7)HS/HR/PS/PR	7	17,18	18.8	Former Firing Ranges (1000-yd, 600-yd, 500-yd, 300-yd) NCO Family Housing (485,487) NCO Family Housing (489)	Potential release of inorganics associated with rifle range activities. Former storage of No. 2 fuel oil. Former storage and release of No. 2 fuel oil.	19. 16,49. 15,49,62.	4-8, App H 2-2,3-7,3-8, 4-14,App D 2-2,3-7,3-8, 4-14,App D	None. All USTs removed. UST removed. 7 tons of contaminated soil removed. Monitoring pipe installed.

^a = = On Figure J-1
^b = = From Appendix A
^c NA = = EBS Page Not Applicable
J-7

Table J-1 (continued)

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
4(7)HS/HR/PS/PR	7	17,18	18.8	NCO Family Housing (491)	Former storage and release of No. 2 fuel oil.	15,49,62.	2-2,3-7,3-8, 4-14, App D	UST removed. 8 tons of contaminated soil removed. Monitoring pipe installed.
				NCO Family Housing (493)	Former storage and release of No. 2 fuel oil.	15,49,62.	2-2,3-7,3-8, 4-14, App D	UST removed. 7 tons of contaminated soil removed. Monitoring pipe installed.
				Guest House (520)	Storage of No. 2 fuel oil.	40,49,62.	2-2,3-7,3-8, 4-14, App D	UST replaced. Two monitoring pipes installed.
				Commissary (518)	Storage of No. 2 fuel	49.	2-2,3-7,3-8, 4-14, App D	None.
				Post Exchange (PX) (517)	Storage of hazardous substances.	41,68.	2-9,3-4, App B	None.
				Bowling Center (509)	Storage of hazardous substances and No. 2 fuel oil.	11,12,49.	2-2,2-9,3-4, 3-7,3-8,4-14, App B, App D	UST replaced.
				Old Commissary (507/8)	Storage of hazardous substances and No. 2 fuel oil.	11,12,49.	2-2,2-9,3-4, 3-7,3-8,4-14, App B, App D	Building and UST replaced.

a	=	On Figure J-1	c	=	EBS Page
b	=	From Appendix A	NA	=	Not Applicable

J-8

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
4(7)HS/HR/PS/PR	7	17,18	18.8	Childhood Development Center (506)	Storage of hazardous substances and No. 2 fuel oil.	41,49,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	UST replaced.
				Exchange Service Station (515)	Storage of hazardous substances. Storage and release of waste oil, No. 2 fuel oil, and gasoline.	11,12,41,49, 60,61,65,68.	2-2,2-9,3-4, 3-7,3-8,4-2, 4-14,App B, App D	One waste oil UST removed. Four USTs replaced. 398 cubic yards of soil removed. Monitoring pipes installed.

^a = On Figure J-1
^b = From Appendix A
^c = EBS Page
NA = Not Applicable
J-9

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
5(4)PS/PR	4	20,17	1.1	NCO Family Housing (475)	Former storage and release of No. 2 fuel oil.	16,49,62.	2-2,3-7,3-8, 4-14,App D	All USTs removed. 6.1 tons of contaminated soil removed. Monitoring pipe installed.
				NCO Family Housing (477)	Former storage and release of No. 2 fuel oil.	16,49,62.	2-2,3-7,3-8, 4-14,App D	All USTs removed. 6.0 tons of contaminated soil removed. Monitoring pipe installed.
				NCO Family Housing (479)	Former storage and release of No. 2 fuel oil.	16,49,62.	2-2,3-7,3-8, 4-14,App D	All USTs removed. 6.0 tons of contaminated soil removed. Monitoring pipe installed.
				NCO Family Housing (481)	Former storage and release of No. 2 fuel oil.	16,49,62.	2-2,3-7,3-8, 4-14,App D	All USTs removed. 6 tons of contaminated soil removed. Monitoring pipe installed.

a	=	On Figure J-1	c	=	EBS Page
b	=	From Appendix A	NA	=	Not Applicable
					J-10

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
6(2)PS	2	21,18	6.0	NCO Family Housing (468, 469,471-474, 476,478)	Former storage of No. 2 fuel oil.	16,49.	2-2,3-7,3-8, 4-14,App D	All USTs removed.
7(4)PS/PR	4	23,18	4.2	NCO Family Housing (480)	Former storage and release of No. 2 fuel oil.	15,49	2-2,3-7,3-8, 4-14,App D	UST removed. Monitoring pipe installed to a depth of two feet below tank bottom
				NCO Family Housing (482)	Former storage and release of No. 2 fuel oil.	15,49.	2-2,3-7,3-8, 4-14,App D	UST removed. Monitoring pipe installed to a depth of two feet below tank bottom
				NCO Family Housing (486)	Former storage and release of No. 2 fuel oil.	15,49,62,67.	2-2,3-7,3-8, 4-14,App D	UST removed. Monitoring pipe installed.
				NCO Family Housing (490)	Former storage and release of No. 2 fuel oil.	15,49,62.	2-2,3-7,3-8, 4-14,App D	UST removed. 8 tons of contaminated soil removed. Monitoring pipe installed.
				NCO Family Housing (495)	Storage of No. 2 fuel oil.	15,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. Two monitoring pipes installed.

a = On Figure J-1
b = From Appendix A
c = EBS Page
NA = Not Applicable
J-11

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMIEDIATION OR MITIGATION
8(2)PS	2	25,23	17.1	Youth Activity Center (521)	Storage of No. 2 fuel oil.	39,49,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	UST replaced.
				Officer Family Housing (745-785)	Former storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	All USTs removed.
9(1)	1	28,24	20.4	Recreation Area	No evidence that hazardous substances or petroleum products have been stored, released or disposed in this area.	NA.	None	NA.
10(7)HS/PS /PR	7	29,29	1.6	DPW Maintenance Equipment Area (732-736)	Storage of hazardous substances and waste oil. Potential release of hazardous substances and petroleum products.	49,50,55.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	None.
				Auto Wash Rack (731)	Potential release of petroleum products.	50.	3-4,4-6	A berm was constructed in front of wash area in 1992.
11(2)PS	2	30,29	4.8	Officer Family Housing (720, 721,725-729)	Former storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	All USTs removed.

a	=	On Figure J-1
b	=	From Appendix A

C	=	EBS Page
NA	=	Not Applicable

J-12

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
12(7)HR/PS /PR	7	31,29	1.0	Officer Family Housing (724)	Former storage and release of No. 2 fuel oil.	49,59,68.	2-9,3-4,App B	Adsorbents were used to contain and remove 310 gallons of spilled No. 2 fuel oil in 1993. Surface soil, two inches deep, was also removed. UST removed.
				Officer Family Housing (722,723)	Former storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	All USTs removed.
				Former 75-yd Pistol Range	Potential release of inorganics associated with rifle range activities.	19.	4-8, App H	None.

a	=	On Figure J-1	c	=	EBS Page
b	=	From Appendix A	NA	=	Not Applicable

J-13

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDIATION OR MITIGATION
13(7)HS/HR /PS/PR	7	32,27	41.5	Motor Pool (700)	Storage and potential release of hazardous substances. Storage and release of gasoline, diesel, and fuel oil.	11,12,47,49, 55,62,68.	2-2,2-3,2-9, 3-4,3-7,3-8, 4-5,4-6,4-14, App B,App D	Two recent spills, 1.5 gallons of diesel fuel in 1994 and 11 gallons of No. 2 fuel oil in 1995, were contained and removed with adsorbents.
				Exchange Service Outlet (504)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-5,4-14, App D	UST replaced.
				Child Development Classrooms (503)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Lake Wastler	Release of hazardous substances and petroleum products.	68.	2-2,2-9,3-4,3-5, 3-7,3-8,3-10, 4-4,4-5,4-6, 4-7,4-14, App B,App D	About one gallon of hydraulic fluid released adjacent to the lake in 1993 was removed with adsorbents. Sediment was also dredged in 1993.

^a = = On Figure J-1 From Appendix A
^b = = EBS Page Not Applicable J-14
^c NA

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
13(7)HS/HR/PS/PR	7	32,27	41.5	Lake Royer	Release of hazardous substances and petroleum products.	21,63,68.	2-2,2-9,3-4, 3-5,3-7,3-8, 3-9,3-12,4-7, 4-14,App B, App D	A release of paint was skimmed off from water surface in 1991. Remaining paint was mixed and dispersed with lake water and discharged at lake outfall. Four feet of bottom sediments was dredged in 1981.
				Golf Maintenance Shop (5)	Storage and potential release of hazardous substances. Storage and release of No. 2 fuel oil.	11,12,41,49, 62,63,67,68, 20,28	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	Recovered majority of No. 2 fuel spilled into tank manway in 1992. UST replaced. Two monitoring pipes installed.
14(2)PS	2	33,30	0.8	Position Quarters (710)	Former storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	UST removed.
15(2)PS	2	35,28	3.9	Officers Quarters (800)	Former storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST removed. Two monitoring pipes installed.
				Position Quarters (811)	Former storage of No. 2 fuel oil.	43,44,49.	2-2,3-7,3-8, 4-14,App D	UST replaced with underground propane tank.

	a	b		c	EBS Page
	=	=	On Figure J-1	NA	Not Applicable
			From Appendix A		J-15

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
16(4)HS/PS /PR	4	37,28	2.3	Outdoor Recreation (834)	Storage and potential release of hazardous substances and diesel fuel.	11,12,41,49, 51,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	UST replaced. 61 tons of contaminated soil removed.
				Water Treatment Plant (835)	Storage and release of petroleum products.	11,12,49.	2-2,3-5,3-7, 3-8,3-10,4-14, App D	UST removed.
				Swimming Pool (836)	Storage and release of diesel fuel.	11,12,49.	2-2,3-7,3-8, 4-14,App D	UST replaced. 113 tons of soil removed.
				Former Thrift Shop and Former Museum (829,831)	Former storage and release of No. 2 fuel oil.	11,12,49,62.	4-6	Both bldgs were demolished in FY92. UST removed. Monitoring pipe installed.
17(2)HS/PS	2	38,32	9.7	Former Warehouse (833)	Former morgue and herbicide storage area.	39,40,42.	4-6	Bldg demolished in FY92.
				General Purpose Storage (837)	Storage of hazardous substances and No. 2 fuel oil.	11,12,49,62.	2-2,3-4,3-7, 3-8,4-6,4-14, App D	UST replaced. Two monitoring pipes installed.
				Position Quarters (860)	Former storage of No. 2 fuel oil.	43,44,49.	2-2,3-7,3-8, 4-14,App D	UST replaced with underground propane tank.

^a = = On Figure J-1
^b = = From Appendix A
^c = = EBS Page
NA = Not Applicable
J-16

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
18(7)HS/HR/PS/PR	7	40,32	3.2	900 Storage Area (907,909)	Storage and potential release of hazardous substances and petroleum products.	13,19,41,55, 68.	2-2,2-9,3-4, 3-7,3-8,4-7, 4-8,4-14, App B, App D	None.
19(4)HR/PS	4	40,26	1.1	Consolidated Open Dining (11)	Release of hazardous substances. Storage of No. 2 fuel oil.	49,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B, App D	A spill of 50 gallons in 1993 and one gallon in 1994 of hydraulic oil were contained and removed with adsorbents. Contaminated surface soil was also removed. UST replaced.

^a = On Figure J-1
^b = From Appendix A
^c = EBS Page
NA = Not Applicable
J-17

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
20(4)HS/PS /PR	4	37,25	3.7	Warehouse Storage (601)	Storage of hazardous substances.	41,68.	2-9,3-4,4-5, App B	None.
				Storage Area (602)	Storage of hazardous substances Storage of petroleum products.	41,68.	2-9,3-4,4-5, App B	None.
				Warehouse Storage (603)	Storage of hazardous substances. Storage and release of No. 2 fuel oil.	41,49,53,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	One UST removed, One UST replaced.
				Old Service Station (605)	Storage and release of gasoline.	49,64.	2-2,3-7,3-8, 4-6,4-14, App D	Two USTs abandoned in place. Monitoring pipe installed.
21(1)	1	42,23	34	Parade Ground	No evidence that hazardous substances or petroleum products have been stored, released or disposed in this area.	NA.	NA.	None.
				Pavilion (13) Flag Pole (210) Education Center (304) Former Flight Control Tower (604)	No evidence that hazardous substances or petroleum products have been stored, released or disposed in this area.	NA.	NA.	None.

^a = = On Figure J-1
^b = = From Appendix A
^c = = EBS Page
NA = Not Applicable
J-18

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
22(1)	1	40,14	3.5	300,000-gallon Post Reservoir	No evidence that hazardous substances or petroleum products have been stored, released, or disposed in this area.	NA.	NA.	None.
23(2)HS/PS	2	36,18	77	Admin (607)	Storage and release of No. 2 fuel oil.	49,62.	2-2,3-7,3-8, 4-14,App D	Two monitoring pipes installed.
				Fire Station (502)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	UST removed. Bldg replaced.
				Barracks (500)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Barracks (400)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Barracks (402)	Storage of hazardous substances and No. 2 fuel oil.	41,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	UST replaced (same UST for Bldgs 402 & 403). Monitoring pipe installed.
				Maintenance Shop (360)	Storage of No. 2 fuel oil.	49,57.	2-2,3-7,3-8, 4-14,App D	UST abandoned.

^a = On Figure J-1
^b = From Appendix A
^c = EBS Page
NA = Not Applicable
J-19

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
23(2)HS/PS	2	36,18	77	Family Support (351)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST removed. Two monitoring pipes installed.
				Personnel (349-350)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Admin (343)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	UST replaced.
				Health Clinic (341)	Storage of hazardous substances and No. 2 fuel oil.	11,12,41,49, 62,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	UST replaced. Two monitoring pipes installed.
				Education Center (337)	Storage of hazardous substances and No. 2 fuel oil.	49,62.	2-2,2-9,3-4, 3-7,3-8,4-14, App B,App D	Two monitoring pipes installed.
				Dental Clinic (332)	Storage of hazardous substances and No. 2 fuel oil.	11,12,41,49, 62,68.	2-2,2-9,3-3, 3-4,3-7,3-8, 4-3,4-14, App B,App D	UST replaced. Two monitoring pipes installed.
				Museum (326)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Barracks (324-325)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	None.

a = On Figure J-1 c = EBS Page
b = From Appendix A NA = Not Applicable
J-20

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
23(2)HS/PS	2	36, 18	77	Admin (313)	Storage of No. 2 fuel oil.	11, 12, 49	2-2,3-7,3-8, 4-14, App D	UST replaced.
				Admin (305)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14, App D	UST replaced.
				Photographic Laboratory (301)	Storage of hazardous substances and No. 2 fuel oil.	41, 49, 68.	2-2,2-9,3-4,3-7, 3-8,4-3,4-14, App B, App D	UST replaced.
				Admin (205)	Storage of No. 2 fuel oil.	11, 22, 49, 62.	2-2,3-7,3-8, 4-14, App D	UST replaced. Two monitoring pipes installed.
				Post HQ (203-204)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14, App D	UST replaced.
				Admin (201)	Storage of No. 2 fuel oil.	11, 12, 49, 62.	2-2,3-7,3-8, 4-14, App D	UST replaced. Monitoring pipe installed.
				Post HQ (200)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14, App D	UST replaced.
				Generator (162)	Storage of diesel fuel.	49.	2-2,3-7,3-8, 4-14, App D	UST replaced.
				Position Quarters (155)	Storage of No. 2 fuel oil.	43, 44, 49.	2-2,3-7,3-8, 4-14, App D	UST removal pending.
				Drug/Alcohol Center (150)	Storage of No. 2 fuel oil.	11, 12, 49, 62.	2-2,3-7,3-8,4-3, 4-14, App D	UST replaced. Two monitoring pipes installed.

a = On Figure J-1
 b = From Appendix A
 c = EBS Page
 NA = Not Applicable
 J-21

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
23(2)HS/PS	2	36,18	77	Finance Admin (147)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced. Two monitoring pipes installed.
				USAISEC-CONUS (143)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8,4-3, 4-14,App D	None.
				Office of Acquisition (134)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8,4-3, 4-14,App D	UST removed.
				Office of Acquisition (132-133)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced. Monitoring pipe installed.
				Admin (131)	Storage No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Access Facility (124)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced. Two monitoring pipes installed.
				Provost Marshall (123)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced.
				Heat PI (113)	Storage of No. 2 fuel oil.	11,12,49.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced.
				Main Store (100)	Storage of No. 2 fuel oil.	49.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced.

^a = = On Figure J-1
^b = = From Appendix A
^c = = EBS Page
 = = Not Applicable
 = = J-22

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
23(2)HS/PS	2	36,18	77	Position Quarters (4)	Storage of No. 2 fuel oil.	43,44,49.	2-2,3-7,3-8, 4-14, App D	UST removal pending.
				Gymnasium (3)	Storage of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14, App D	UST replaced. Two monitoring pipes installed.
24(4)HS/HR /PS/PR	4	34,17	2.4	Skill Development Center (346,347)	Storage of hazardous substances Storage and release of No. 2 fuel oil.	11,12,41,49, 62,68.	2-2,2-9,3-4, 3-7,3-8,4-14, App B, App D	UST replaced. Contaminated soil removed. Two monitoring pipes installed.
				Admin (334-335)	Storage and release of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14, App D	UST replaced. 15 cubic yards of contaminated soil and 200 gallons of contaminated water removed. Two monitoring pipes installed.

a = On Figure J-1
b = From Appendix A
c = EBS Page
= Not Applicable
= J-23

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
24(4)HS/HR /PS/PR	4	34,17	2.4	Admin (330)	Storage and release of diesel fuel.	11,12,49.	2-2,3-7,3-8, 4-14,App D	UST replaced. 59 tons of contaminated soil removed.
				Access Facility (327)	Storage and release of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST abandoned. Two monitoring pipes installed.
				Admin (303)	Storage and release of No. 2 fuel oil.	11,12,49,62.	2-2,3-7,3-8, 4-14,App D	UST replaced. 10.6 cubic yards of contaminated soil removed. Two monitoring pipes installed.
				Post Chapel (302)	Storage and release of diesel fuel.	11,12,49.	2-2,3-7,3-8,4-3, 4-14,App D	One UST removed, One UST replaced. Total of 121 tons of contaminated soil removed. Monitoring pipes installed.
				Main Library (202)	Storage of hazardous substances Storage and release of No. 2 fuel oil.	11,12,41,49, 68.	2-2,2-9,3-4,3-7, 3-8,4-3,4-14, App B,App D	UST replaced. 92 tons of contaminated soil removed.

a = On Figure J-1
b = From Appendix A

c = EBS Page
NA = Not Applicable

J-24

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
24(4)HS/HR/PS/PR	4	34,17	2.4	Data Processing & Tele-communication Facility (160)	Storage of hazardous substances. Storage and release of No. 2 fuel oil.	11,12,41,49, 62,68.	2-2,2-9,3-4,3-7, 3-8,4-3,4-14, App B,App D	UST replaced. 32.5 cubic yards of contaminated soil removed. Two monitoring pipes installed.
				Scientific Operations (152)	Storage of No. 2 fuel oil. Release of hazardous substances.	49,68.	2-2,2-9,3-4,3-7, 3-8,4-3,4-14, App B,App D	A five-gallon spill of engine oil and antifreeze in 1994 was contained and removed with adsorbents. Two USTs replaced.
				Finance Admin (151)	Storage and release of diesel fuel.	11,12,49,56.	2-2,3-7,3-8,4-3, 4-14,App D	One UST replaced, one UST abandoned. 336 tons of contaminated soil removed. Monitoring pipe installed.

a	b	c	EBS Page
On Figure J-1	=	=	
From Appendix A	=	NA	Not Applicable
			J-25

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDIATION OR MITIGATION
24(4)HS/HR/PS/PR	4	34,17	2.4	Office of Acquisition (148)	Release of hazardous substances. Storage of No. 2 fuel oil.	11,12,49,62,68.	2-2,2-9,3-4,3-7,3-8,4-14, App B, App D	A 1994 spill of five gallons of hydraulic fluid was contained and removed with adsorbents. UST replaced. Two monitoring pipes installed.
				Electrical Maintenance Shop (141)	Storage of hazardous substances. Storage and release of No. 2 fuel oil.	11,12,49,62.	2-2,2-9,3-4,3-7,3-8,4-14, App B, App D	UST replaced. 6 cubic yards of contaminated soil removed. Two monitoring pipes installed.
				USAISC-CONUS HQ (138-139)	Storage of hazardous substances. Storage and release of No. 2 fuel oil.	11,12,41,49,62,68.	2-2,2-9,3-4,3-7,3-8,4-14, App B, App D	UST replaced. 6.1 cubic yards of contaminated soil removed. Two monitoring pipes installed.
				USAISEC-CONUS (136-137)	Storage and release of No. 2 fuel oil.	11,12,49.	2-2,3-7,3-8,4-3,4-14, App D	UST replaced. 179 tons of soil removed. Monitoring pipe installed.

a	=	On Figure J-1	c	EBS Page
b	=	From Appendix A	NA	Not Applicable
				J-26

**Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison**

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
24(4)HS/HR /PS/PR	4	34,17	2.4	Front Gate (130)	Storage and release of No. 2 fuel oil.	11,12,49.	2-2,3-7,3-8,4-3, 4-14,App D	UST replaced. 110 tons of contaminated soil removed. Monitoring pipe installed.
				Community Center (102)	Storage and release of No. 2 fuel oil.	49,52,68.	2-2,3-7,3-8,4-3, 4-14,App D	The 1994 spill of less than five gallons of No. 2 fuel oil was contained and removed with adsorbents. UST replaced.
				Theater (2)	Storage and release of diesel fuel	11,12,49.	2-2,3-7,3-8, 4-14,App D	UST replaced. 76 tons of contaminated soil removed. One monitoring pipe installed.

a = On Figure J-1
 b = From Appendix A
 c = EBS Page
 = Not Applicable
 = J-27

Table J-1 (continued)
CERFA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	CATEGORY	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	BASIS	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
25(7)HS/HR /PS/PR	7	33,18	1.1	Auto Craft Shop (401)	Storage and release of hazardous substances and petroleum products.	11,12,41,49, 55,62,68.	2-2,2-9,3-4,4-4, 3-7,3-8,4-14, App B,App D	Two recent spills, 30 gallons of hydraulic oil in 1993 and 7.5 gallons of waste oil in 1995, were contained and removed with adsorbents. UST replaced. Two monitoring pipes installed.
26(4)PS/PR	4	25,15	0.26	NCO Family Housing (457-1)	Former storage and release of No. 2 fuel oil.	49,62.	2-2,3-7,3-8, 4-14,App D	UST removed. Monitoring pipe installed.
27(2)PS	2	23,14	11	NCO Family Housing (450-467)	Former storage of No. 2 fuel oil.	49.	2-2,3-7,3-8, 4-14,App D	All USTs removed.
28(4)PS/PR	4	20,15	.27	NCO Family Housing (470)	Former storage and release of No. 2 fuel oil.	16,49.	2-2,3-7,3-8, 4-14,App D	All USTs removed.
29(4)HR	4	22,8	3.7	Former Skeet Range	Release of lead, other inorganics, and PAH associated with skeet range activities.	31,32,33.	2-1,4-1,4-13, App H	Lead-contaminated soil removed. Additional investigation planned.

a = On Figure J-1 c = EBS Page
b = From Appendix A NA = Not Applicable
J-28

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Table J-2.
Non-CERCLA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	NON-CERCLA ISSUES	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDIATION OR MITIGATION
1Q-X(P)	9,12	370	Reserved Land/Buffer Wetlands Child Development Center (506) Former Storage and Commissary (507-508) Post Exchange (PX) (517) Commissary (518)	Possible UXO.	2, 14, 19	2-4,2-10,4-9, 4-13,4-15,H-10	During construction of the new PX and Commissary, UXO was unearthed and removed.
2Q-A/L/X(P)	20,13	10	NCO Family Housing (400s)	Presence of asbestos-containing materials and lead-based paint. Possible UXO.	2,7,9,14,19	2-3,2-4,2-10, 4-9,4-11,4-12, 4-13,4-15, App F,H-10	Insulation was replaced in mechanical rooms and asbestos was removed at the same time.
3Q-A/L/X(P)	20,18	15	NCO Family Housing (400s) Guest House (520)	Presence of asbestos-containing materials and lead-based paint. Possible UXO. 3 PCB-containing transformers were replaced on pole near building.	2,7,9,14,19, 54,71	2-3,2-4,2-10, 4-9,4-11,4-12, 4-13,4-15, App F,H-10	Insulation was replaced in mechanical rooms and asbestos was removed at the same time. Three PCB-containing transformers in use on pole 130B near (520) were replaced in 1989.

a = On Figure J-1
b = From Appendix A
c = NA
= EBS Page
= Not Applicable
J-29

Table J-2 (continued)
Non-CERCLA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	NON-CERCLA ISSUES	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
4Q-A/L/X(P)	27,28	19	Officer Family Housing (700s) DPW Maintenance & Equipment Area (731-736)	Presence of asbestos-containing materials and lead-based paint. Possible UXO.	2,7,9,14,19	2-3,2-4,2-10, 4-9,4-11,4-12, 4-13,4-15, App F,H-10	Insulation was replaced in mechanical rooms and asbestos was removed at the same time.
5Q-A/L	31,30	7.5	Officer Family Housing (700s) Motor Pool (700,716)	Presence of asbestos-containing materials and lead-based paint.	7,9,19,27	2-3,2-4,2-10, 4-11,4-12, 4-15,App F	Insulation was replaced in mechanical rooms and asbestos was removed at the same time. Lead-based paint abatement in (716) occurred in July 1995.
6Q-A/L	33,30	0.7	Position Quarters (710,711)	Presence of asbestos-containing materials and lead-based paint.	7,9	2-3,2-4,2-10, 4-11,4-12, 4-15,App F	None.
7Q-A/L	38,29	4.5	Admin (800) Officers Quarters (809,811) Outdoor Recreation (825,832,834) Water Treatment (835,836)	Presence of asbestos-containing materials and lead-based paint.	7,9,19,27	2-3,2-4,2-10, 4-11,4-12, 4-15,App F	None.

a = On Figure J-1
b = From Appendix A

c = EBS Page
NA = Not Applicable

J-30

Table J-2 (continued)
Non-CERCLA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	NON-CERCLA ISSUES	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDIATION OR MITIGATION
8Q-A/L	39,31	3	General Purpose Warehouse (837)	Presence of asbestos-containing materials and lead-based paint.	7,27	2-3,2-4,2-10, 4-11,4-12, 4-15,App F	None.
9Q-A/L	42,34	1.5	Incinerators (907,908) Storage Area (909)	Presence of asbestos-containing materials and lead-based paint. 5 PCB-containing transformers were stored here. They have been removed.	7,19,22,23, 27,54,58	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	PCB-containing transformers were removed.
10	42,29	97	Lake Wastler Lake Royer Parade Ground Admin (607) Storage (809)	No evidence that non-CERCLA issues are present in this area.			NA.
11Q-A/L	40,26	2	Lakeside Club Pier Pavilion Recreation Center (11,12,13)	Presence of asbestos-containing materials and lead-based paint.	7,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	None.
12Q-A/L	44,25	1	Golf Maintenance Shop (5)	Presence of asbestos-containing materials and lead-based paint.	7,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	None.
13Q-A/L/RD	36,24	3.2	DPW Maintenance Facility (601-606)	Presence of asbestos-containing materials and lead-based paint. Storage of radioactive materials.	7,19,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	Lead-based paint abatement in (601,603,605) in July 1995.

a = On Figure J-1
b = From Appendix A

c = NA
= Not Applicable
J-31

Table J-2 (continued)
Non-CERCLA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	NON-CERCLA ISSUES	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDATION OR MITIGATION
14Q-A/L	44,23	52	Admin Area (100s-300s)	Presence of asbestos-containing materials and lead-based paint.	7,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	Lead-based paint abatement occurred in July 1995.
15Q-A/L/P	40,20	0.2	Admin (119)	Presence of asbestos-containing materials and lead-based paint. 3 PCB-containing transformers are located on pole near building.	7,19,27,54	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	Pending 1996.
16	39,14	3.2	300,000-gallon Post Reservoir	No evidence that non-CERCLA issues are present in this area.			NA.
17Q-A/L/RD	37,19	0.2	Museum (326)	Presence of asbestos-containing materials and lead-based paint. Storage of radioactive materials.	7,19,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	None.
18Q-A/L/RD	35,17	1.3	Dental Clinic (332) Health Clinic (341)	Presence of asbestos-containing materials and lead-based paint. Storage of radioactive materials.	7,19,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	None.
19Q-A/L/RD	32,18	1.0	Company HQ (402)	Presence of asbestos-containing materials and lead-based paint. Storage of radioactive materials. A PCB-containing transformer in operation was replaced.	7,19,27,37, 38,54,71	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	PCB-containing transformer in use was replaced in 1989.

a = On Figure J-1 c = EBS Page
b = From Appendix A NA = Not Applicable
J-32

Table J-2 (continued)
Non-CERCLA Parcel Descriptions
Fort Ritchie Army Garrison

PARCEL LABEL	COORD (X,Y) ^a	SIZE (Acres)	DESCRIPTION	NON-CERCLA ISSUES	SOURCE OF EVIDENCE ^b	REFERENCE ^c	REMEDIATION OR MITIGATION
20Q-A/L	32,19	0.7	Commissioned Officers HQ and Enlisted Barracks (500)	Presence of asbestos-containing materials and lead-based paint.	7,19,27	2-3,2-4,2-10, 4-11,4-12, 4-13,4-15,App F	None.
21	31,18	6.1	Open Space Parking Lot Well No. 3 (505) Childhood Development Center (510) Fire Station (519)	No evidence that non-CERCLA issues are present in this area.			NA.

a = On Figure J-1
b = From Appendix A

c = NA

= EBS Page
= Not Applicable
J-33

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REQUEST FOR PROPOSAL
THIS IS NOT AN ORDER

RUTGERS — THE STATE UNIVERSITY OF NEW JERSEY
UNIVERSITY PROCUREMENT AND CONTRACTING
P.O. BOX 6999
PISCATAWAY, NJ 08855-6999

THE R.F.P. NUMBER MUST APPEAR ON ALL
CORRESPONDENCE REGARDING THIS
PROPOSAL.

R.F.P. 7-04-08-2

.. RETURN SIGNED PROPOSAL IN A SEALED ENVELOPE. SHOW
R.F.P. # ON OUTSIDE OF ENVELOPE

IN EVENT OF THIS PROPOSAL BEING ACCEPTED, A PURCHASE
ORDER WILL BE SENT.

3. SEE REVERSE SIDE FOR TERMS & CONDITIONS.

4. ANY EXPENSE INCURRED BY THE BIDDER IN CONNECTION
WITH THIS PROPOSAL IS THE SOLE RESPONSIBILITY OF THE
BIDDER.

5. IF PROPOSAL IS NOT F.O.B. DESTINATION, YOU MUST SHOW
COST OF FREIGHT AS A SEPARATE ITEM.

ITI Qualitek
Attn: David Norris
~~40 Fordham Road~~
~~Wilmington, MA 01887~~

**WE HAVE
MOVED**

PLEASE MAKE A
NOTE OF OUR
NEW ADDRESS,
PHONE AND FAX



DATE 8/97	THIS R.F.P. WILL BE OPENED: May 2, 1997	2:00 PM	BY <i>Herman Veigh</i> DIRECTOR OF PURCHASES
PLEASE QUOTE THE FOLLOWING F.O.B. DESTINATION			

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY requests proposals for the design, manufacture and installation of an "MRE
Pouch" Leak Tester in accordance with the attached specifications and following notes:

NOTES:

IT SHALL BE THE RESPONSIBILITY OF THE BIDDER TO VERIFY FIELD CONDITIONS PRIOR TO SUBMITTING A BID. SUBMISSION OF A BID INDICATES
ACKNOWLEDGEMENT AND AGREEMENT OF THE CONDITIONS TO BE MET AND THAT THE BIDDER FULLY UNDERSTANDS THE EXTENT OF THE OBLIGATION AND
NOT MAKE ANY CLAIM FOR, OR HAVE RIGHT TO CANCELLATION OR RELIEF WITHOUT PENALTY OF THE CONTRACT BECAUSE OF ANY MISUNDERSTANDING
OR LACK OF INFORMATION.

TECHNICAL QUESTIONS PERTAINING TO SPECIFICATIONS ARE TO BE DIRECTED TO MR. NEAL LITMAN AT (908) 445-6137.

C. QUESTIONS PERTAINING TO PROPOSAL PROCEDURES ARE DIRECTED TO MR. MICHAEL DUNN AT (908) 445-5070.

THE FOLLOWING MUST BE ADDRESSED IN DETAIL WITH EACH PROPOSAL AND WILL BE CONSIDERED IN THE EVALUATION: DELIVERY, PERFORMANCE,
ENGINEERING FEATURES, COST, SERVICE, AND TRAINING.

E. PRICES ARE TO BE F.O.B. DELIVERED TO RUTGERS UNIVERSITY FOOD MANUFACTURING TECHNOLOGY FACILITY, 120 NEW ENGLAND AVENUE,
PISCATAWAY, NEW JERSEY (SEE SECTION 7.0 OF SPECIFICATIONS FOR ALTERNATE SITES.) ADDITIONAL COSTS (IF ANY) ARE TO BE INCLUDED
WITH YOUR OPTION PRICES AS DETAILED IN NOTE F.

ALL OPTIONAL EQUIPMENT RECOMMENDED SPARE PARTS, AND ACCESSORIES SHALL BE PRICED INDIVIDUALLY AND INCLUDED ON COMPANY
LETTERHEAD AND INCLUDED WITH YOUR PROPOSAL.

BIDDERS ARE REQUESTED TO SUBMIT THREE COMPLETE SETS OF THE PROPOSAL.

PLEASE INDICATE COST OF PROPOSAL AS FOLLOWS:

LUMP SUM \$ 454,600 (see attached proposal)

DELIVERY & INSTALLATION 196 DAYS ARO. (see attached proposal)

1. PLEASE NOTE ADDITIONAL TERMS & CONDITIONS ON REVERSE SIDE OF THIS SHEET.

ALL RUTGERS UNIVERSITY TERMS AND CONDITIONS WILL BECOME PART OF ANY CONTRACT(S) AWARDED AS A RESULT OF THE REQUEST FOR BID OR
PROPOSAL, WHETHER STATED IN PART, IN SUMMARY OR BY REFERENCE. IN THE EVENT THE BIDDER'S TERMS AND CONDITIONS CONFLICT WITH RUTGERS,
THE RUTGERS TERMS AND CONDITIONS WILL PREVAIL, UNLESS THE BIDDER IS NOTIFIED IN WRITING OF RUTGERS ACCEPTANCE OF THE BIDDER'S TERMS
AND CONDITIONS.

ANY EXPENSE INCURRED BY THE VENDOR IN CONNECTION WITH THIS PROPOSAL IS THE SOLE RESPONSIBILITY OF THE VENDOR.

.. READ THE ENTIRE PROPOSAL INCLUDING ALL TERMS, CONDITIONS AND SPECIFICATIONS.

PROPOSAL DOCUMENTS ARE TO BE SUBMITTED IN INK, ANY PRICE ALTERATIONS I.E. WHITEOUTS, CROSSOUTS AND ERASURES MUST BE INITIALED
OTHERWISE THE PROPOSAL WILL BE REJECTED. (SEE NUMBER 17, TERMS & CONDITIONS)

SIGNATURE OF THE BIDDER ATTESTS THAT THE BIDDER HAS READ, UNDERSTANDS, AND AGREES TO ALL TERMS, CONDITIONS, AND SPECIFICATIONS SET FORTH
IN THE REQUEST FOR PROPOSAL UNLESS OTHERWISE STATED IN WRITING AND SUBMITTED WITH THE PROPOSAL. FURTHERMORE, SIGNATURE BY THE BIDDER
SIGNIFIES THAT THIS IS A CONTRACT IMMEDIATELY UPON RECEIPT OF THE PURCHASE ORDER FROM RUTGERS UNIVERSITY FOR ANY OR ALL OF THE ITEMS,
AND FOR THE LENGTH OF TIME INDICATED IN THE PROPOSAL. FAILURE TO ACCEPT A CONTRACT WITHIN THE TIME PERIOD INDICATED IN THE PROPOSAL,
HOLD PRICES OR MEET ANY OTHER TERMS AND CONDITIONS AS DEFINED IN THE PROPOSAL DURING THE TERM OF THE CONTRACT, SHALL CONSTITUTE A
Breach AND WILL RESULT IN SUSPENSION OR DISBARMENT FROM FURTHER BIDDING TO RUTGERS UNIVERSITY.

REFER ALL QUESTIONS REGARDING THIS REQUEST TO:
MICHAEL DUNN/H/(908)445-5070

NOTE: SHOW ALL TAXES AS SEPARATE ITEM

GRAND TOTAL → \$454,600

THIS SPACE TO BE FILLED IN BY BIDDER

SHIPMENT CAN BE MADE IN 196 DAYS FROM RECEIPT OF ORDER

FO3 Destination

TERMS: see attached proposal

"We quote you as above subject to the Terms and Conditions on the reverse.

SIGNATURE:

PRINT NAME AND TITLE

PHONE NUMBER

DAVID MORRIS PRESIDENT 508-670-1111

REQUEST FOR PROPOSAL
THIS IS NOT AN ORDER

RUTGERS — THE STATE UNIVERSITY OF NEW JERSEY
UNIVERSITY PROCUREMENT AND CONTRACTING
P.O. BOX 6999
PISCATAWAY, NJ 08855-6999

THE R.F.P. NUMBER MUST APPEAR ON ALL
CORRESPONDENCE REGARDING THIS
PROPOSAL

R.F.P. 7-04-08-2

RETURN SIGNED PROPOSAL IN A SEALED ENVELOPE. SHOW
R.F.P. # ON OUTSIDE OF ENVELOPE.

IN EVENT OF THIS PROPOSAL BEING ACCEPTED, A PURCHASE
ORDER WILL BE SENT.

3. SEE REVERSE SIDE FOR TERMS & CONDITIONS.

TI Qualitek
Attn: David Norris
940 Fordham Road
Bilmington, MA 01837

**WE HAVE
MOVED**

PLEASE MAKE A
NOTE OF OUR
NEW ADDRESS,
PHONE AND FAX



4. ANY EXPENSE INCURRED BY THE BIDDER IN CONNECTION
WITH THIS PROPOSAL IS THE SOLE RESPONSIBILITY OF THE
BIDDER.

5. IF PROPOSAL IS NOT F.O.B. DESTINATION, YOU MUST SHOW
COST OF FREIGHT AS A SEPARATE ITEM.

DATE 1/8/97	THIS R.F.P. WILL BE OPENED: May 2, 1997	2:00 PM	BY DIRECTOR OF PURCHASES
PLEASE QUOTE THE FOLLOWING F.O.B. DESTINATION			
<p>THIS (ORIGINAL LEGAL SIZE SHEET) REQUEST FOR PROPOSAL FORM "MUST" BE SIGNED AT THE BOTTOM AND RETURNED WITH THE BID SHEET(S). YOUR ENTIRE BID WILL BE REJECTED AND DISQUALIFIED IF THIS FORM IS "NOT" SIGNED AND RETURNED ON OR BEFORE THE BID DUE DATE AND TIME. FURTHERMORE BIDDERS WHO WISH TO REMAIN ON OUR "QUALIFIED" BIDDERS LIST SHOULD ALSO SIGN AND RETURN THIS BID FORM INDICATING REASON(S) FOR NOT SUBMITTING BIDS OR PROPOSALS.</p> <p>PROPOSALS SHOULD BE RETURNED IN THE ENCLOSED YELLOW ENVELOPE OR ATTACH THE YELLOW ENVELOPE TO THE OUTSIDE OF A LARGE ENVELOPE. IF NECESSARY, TELEGRAPHIC AND FACSIMILE PROPOSALS ARE NOT ACCEPTABLE. BIDDERS MUST SUBMIT SEALED BIDS ONLY. ANY COMMUNICATION (SUCH AS FACSIMILE TRANSMITTAL), WHICH REVEALS THE CONTENTS OF A SEALED PROPOSAL WILL RESULT IN DISQUALIFICATION OF THE ENTIRE PROPOSAL.</p> <p>IT IS THE BIDDERS RESPONSIBILITY TO SEE THAT THEIR PROPOSAL ARRIVES AT THE UNIVERSITY PROCUREMENT & CONTRACTING OFFICE BEFORE THE PROPOSAL OPENING DATE AND TIME.</p> <p>9. PROPOSALS DELIVERED IN PERSON OR BY EXPRESS SERVICE SHOULD BE TO OUR ACTUAL LOCATION.</p> <p>THIS LOCATION IS: RUTGERS-THE STATE UNIVERSITY OF NEW JERSEY UNIVERSITY PROCUREMENT AND CONTRACTING ADMIN. SERVICES ANNEX BLDG. 1 RM. 101 DAVIDSON ROAD/BUSCH CAMPUS P.O. BOX 6999 PISCATAWAY, NEW JERSEY 08855-6999</p> <p>10. ALL CASH TERMS WILL BE ACCEPTABLE, HOWEVER, TERMS LESS THAN 3X-30 DAYS WILL NOT BE CONSIDERED IN THE BID AWARD.</p> <p>11. ANY ADDENDUMS TO THIS REQUEST FOR PROPOSAL MUST BE ACKNOWLEDGED BY SIGNATURE BELOW. FAILURE TO COMPLY WILL RESULT IN REJECTION OF PROPOSAL.</p> <p style="text-align: center;"><u>YOU MUST SIGN BELOW FOR EACH ADDENDUM RECEIVED.</u></p> <p>ADDENDUM: #1 _____ (Signature)</p> <p style="margin-left: 100px;">#2 _____ (Signature)</p> <p style="margin-left: 100px;">#3 _____ (Signature)</p> <p>12. BIDDERS MUST COMPLY WITH ALL PROPOSAL ENCLOSURES AND MUST RETURN CERTAIN ENCLOSURES WITH PROPOSAL FORM. PHOTOCOPIES OF ANY REQUIRED ENCLOSURES ARE NOT VALID. THOSE INDICATED MUST HAVE ORIGINAL SIGNATURES AND NOTARY SEAL. FAILURE TO COMPLY WILL RESULT IN REJECTION OF PROPOSAL.</p> <p>THEY ARE: (1) N.J. PL 1977 C.33 (MUST BE SIGNED AND RETURNED) (2) NON-COLLUSION STATEMENT NCS-1 (MUST BE NOTARIZED) (3) AFFIDAVIT (MUST BE NOTARIZED)</p> <p>13. A. REQUIREMENT TO BE PROVIDED BY SUCCESSFUL BIDDER AFTER PROPOSAL AWARD IS MADE.</p> <p>(1) PL 1975 C.127 WITHIN SEVEN (7) DAYS AFTER RECEIPT OF PURCHASE ORDER. NOTE: "IF AWARDED CONTRACT YOUR COMPANY/FIRM WILL BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF PL 1975 C.127. (NJAC17:27)"</p> <p>(2) INSURANCE, AFTER AWARD AND PRIOR TO START OF WORK.</p> <p>B. SUPPLEMENTAL TERMS & CONDITIONS, FORM STC-1 IS A NOTICE OF REQUIREMENT FOR COMPLIANCE BY BIDDER TO WHOM AN AWARD IS MADE AND IS TO BE RETAINED BY BIDDER.</p> <p>ADDITIONAL ENCLOSURES ARE: DID YOU SHEET/SPECIFICATIONS</p> <p>ALL PROPOSALS SUBMITTED TO RUTGERS UNIVERSITY, PROCUREMENT & CONTRACTING WILL BECOME PUBLIC INFORMATION AS OF THE PROPOSAL OPENING DATE AND TIME.</p> <p>15. NOTE PERMITS - SEE ATTACHMENT PL1. - ATTACHED _____ NOT APPLICABLE <u> X </u></p>			
REFER ALL QUESTIONS REGARDING THIS REQUEST TO: MICHAEL DUNN/H/(908)445-5070		NOTE: SHOW ALL TAXES AS SEPARATE ITEM	GRAND TOTAL ➡ \$454,600

THIS SPACE TO BE FILLED IN BY BIDDER

SHIPMENT CAN BE MADE IN <u>196</u> DAYS FROM RECEIPT OF ORDER	<p>We quote you as above subject to the Terms and Conditions on the reverse.</p> <p>SIGNATURE: <i>David Morris</i></p> <p>PRINT NAME AND TITLE: DAVID MORRIS PRESIDENT</p> <p>PHONE NUMBER: 508-670-1113</p>	
FOB: <u>Destination</u>		
TERMS: <u>See attached proposal</u>		

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One Acre Grid Square
Coordinate Location: (3,35)

3Q-A/L/X(P)

35)

4Q-A/L/X(P) ■

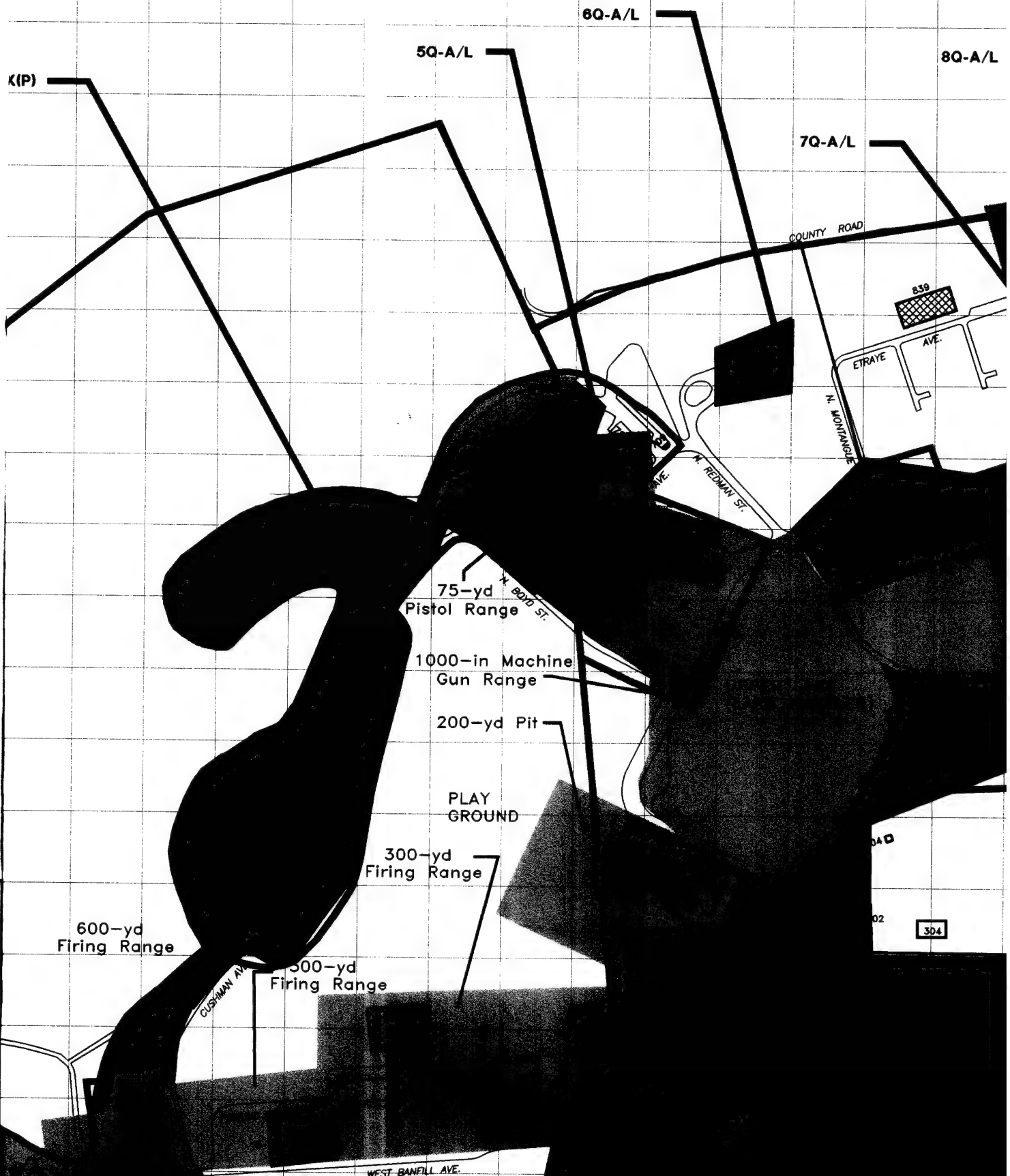
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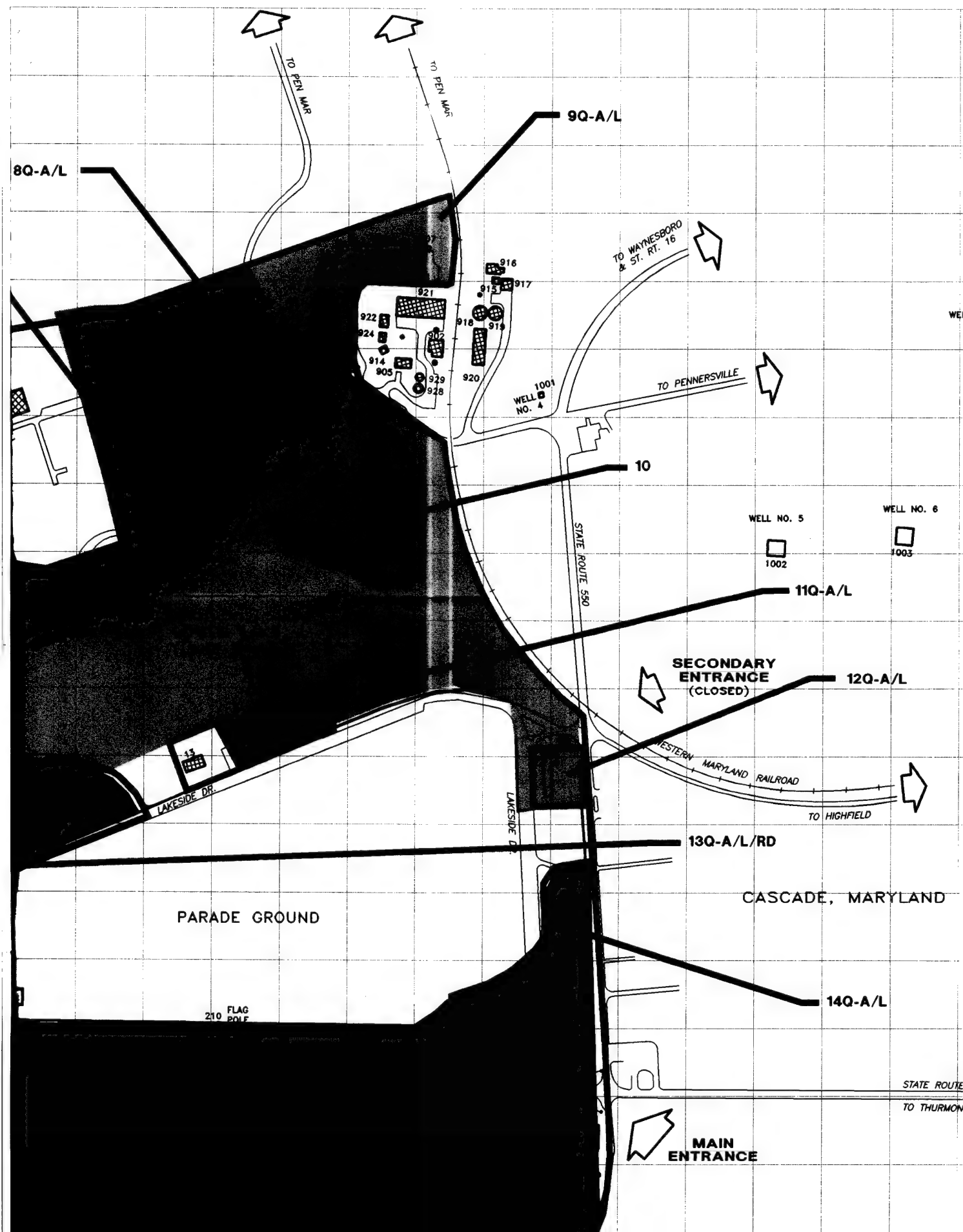
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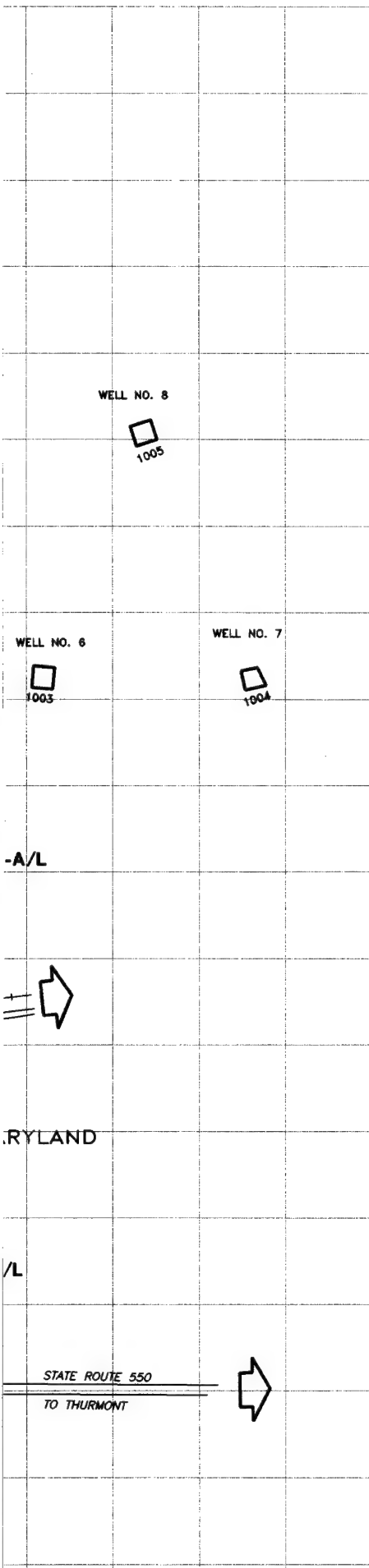
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Firing Range

RESERVOIR ROAD

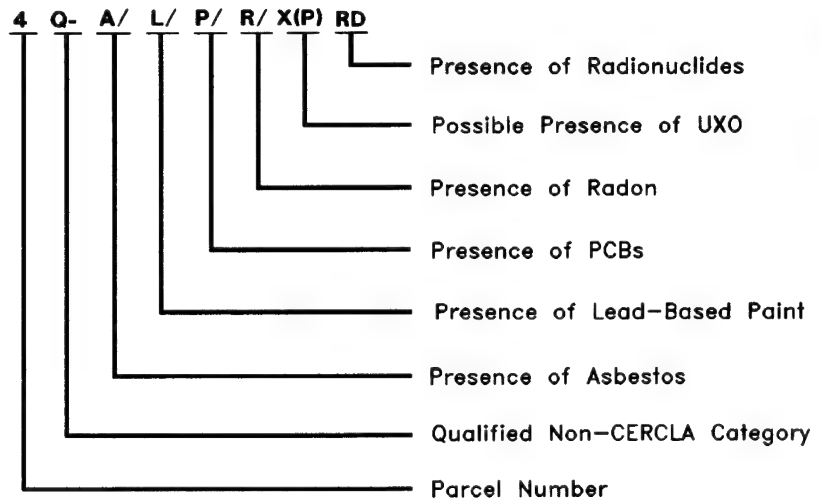
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PARCEL LABEL DEFINITIONS:



LEGEND:



PERMANENT BUILDING

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2Q-A/L/X(P)

1Q-X(P)

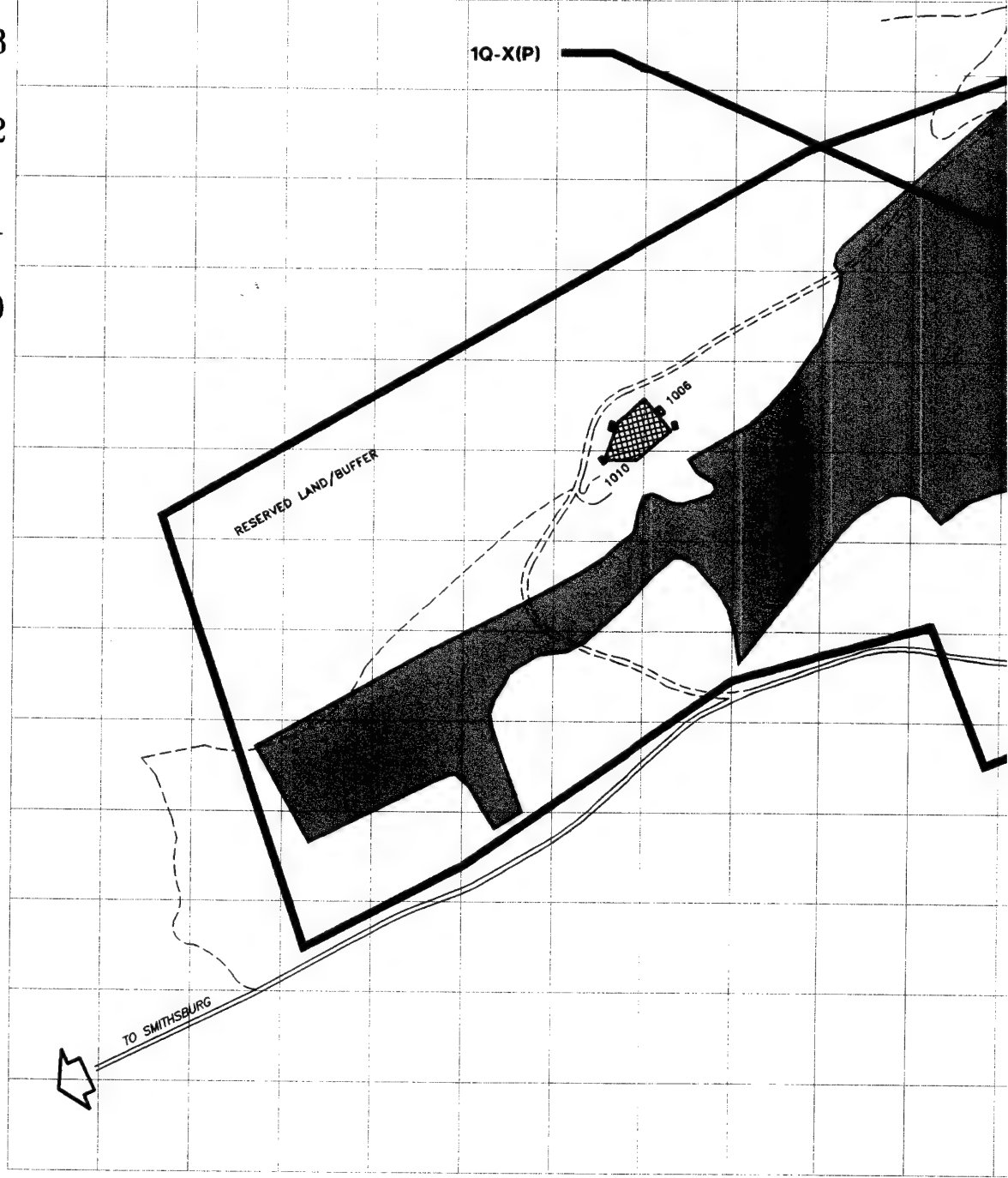
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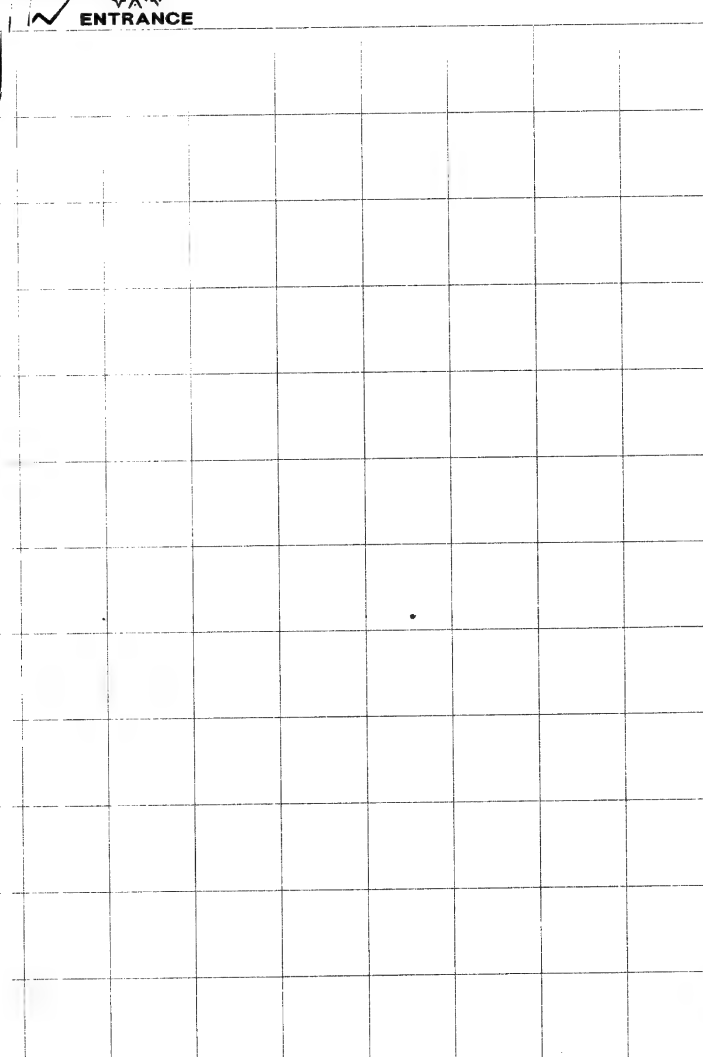
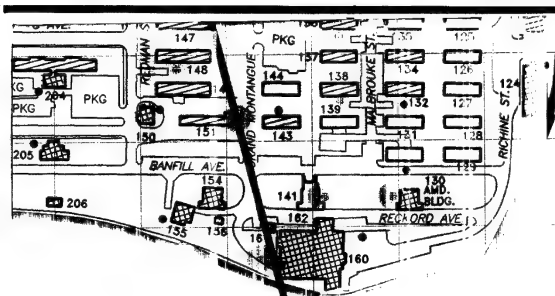
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TO SMITHSBURG

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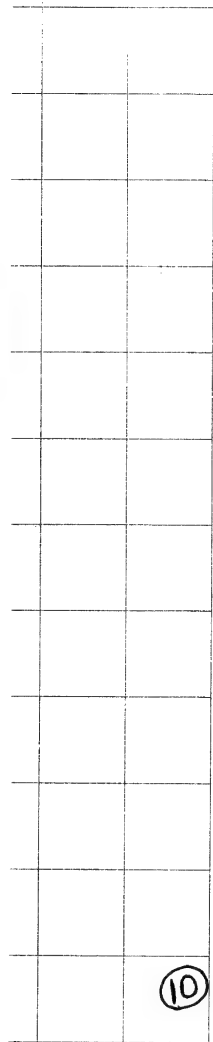


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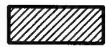
(9)

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U.S. ENVIRONMENTAL	
CONTRACT NO. DACA31-94-D-0	
<div style="display: flex; justify-content: space-between;"> <div> ➡ ICF KAISER </div> <div> 1301 Continental Suite 101 Abingdon, Maryland (410) 612-6350 </div> </div>	
PREPARED KDM	TASK NO: 66225
CHECKED TL	ICF DWG NO:
DATE 06-24-96	FREBSJ-2



PERMANENT BUILDING



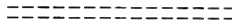
SEMI-PERMANENT BUILDING



TEMPORARY/DEMOLISHED BUILDING



ROADS, PARKING, ETC., PAVED



EARTH OR GRAVEL ROAD, TRAIL, ETC.



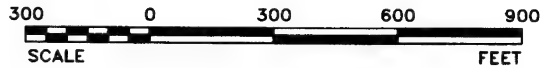
BRAC PROPERTY BOUNDARY



USTs



ASTs



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US ARMY

ENVIRONMENTAL CENTER

ACA31-94-D-0064

R

1301 Continental Drive
Suite 101
Abingdon, Maryland 21009
(410) 612-6350

TASK NO: 66225

ICF DWG NO:

FREBSJ-2

FIGURE J-2

FORT RITCHIE

PARCELS FOR
NON-CERCLA
ISSUES

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One Acre Grid Square
Coordinate Location: (3,35)

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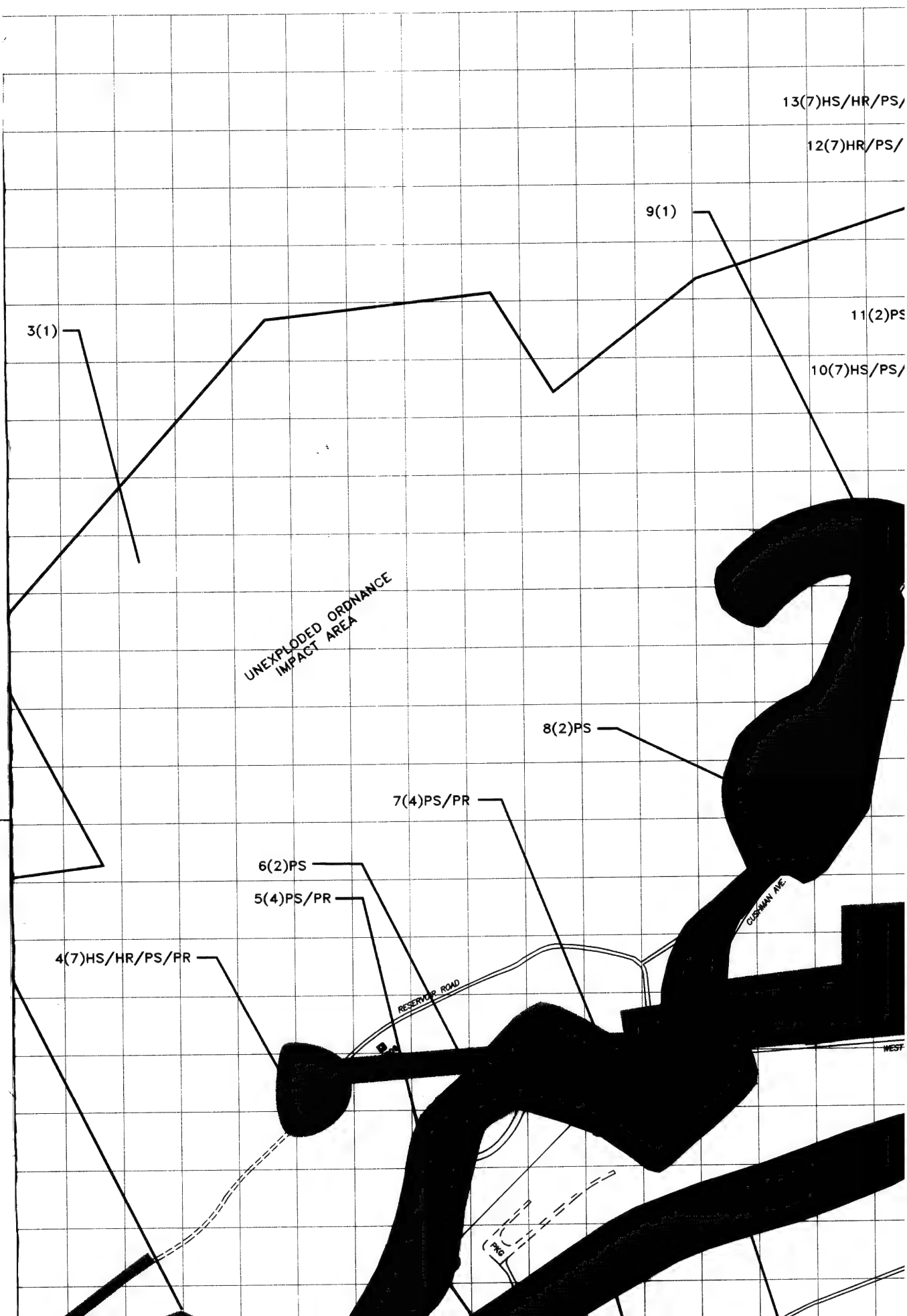
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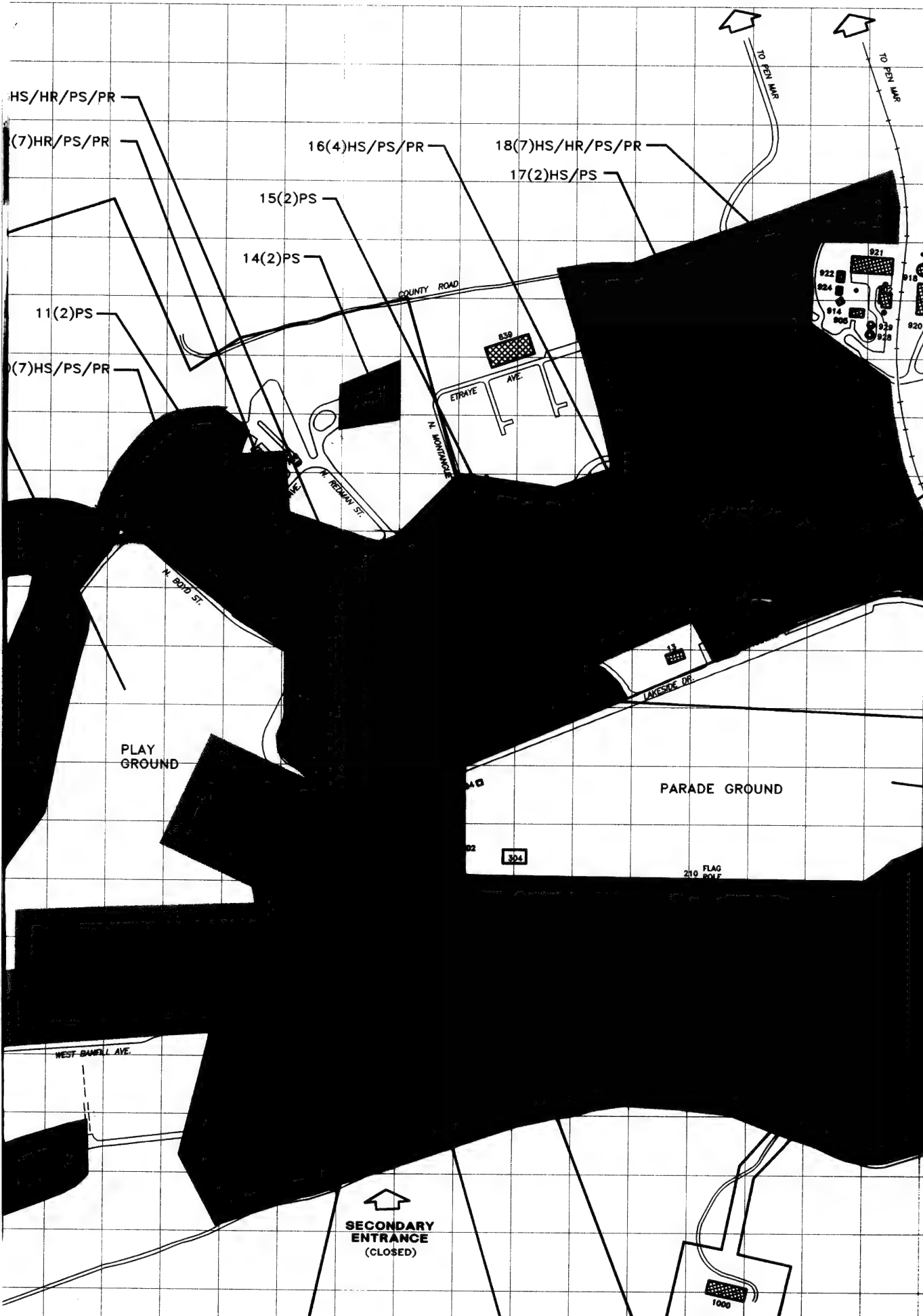
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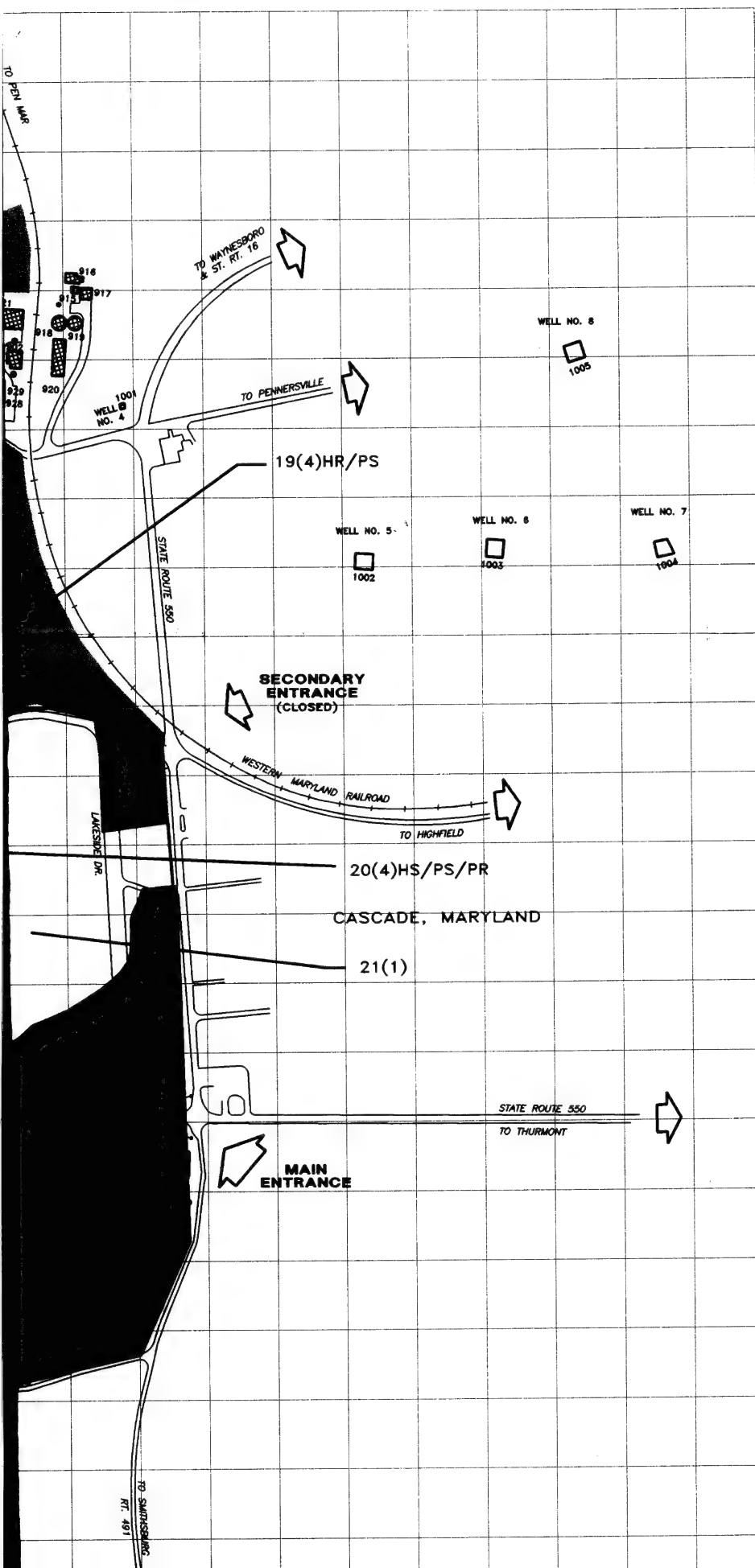
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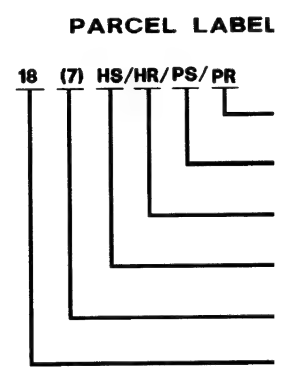
13(7)HS/HR/PS/

12(7)HR/PS/





PARCEL C/		
CATEGORY	COLOR	DEFINITION
1	White	Areas w disposal
2	Blue	Areas w
3	Lt. Green	Areas w and/or n require r
4	Dk. Green	Areas w disposal actions l
5	Yellow	Areas w and/or r action la
6	Red	Areas w and/or r required impleme
7	Gray	Areas th additions



LEGEND:

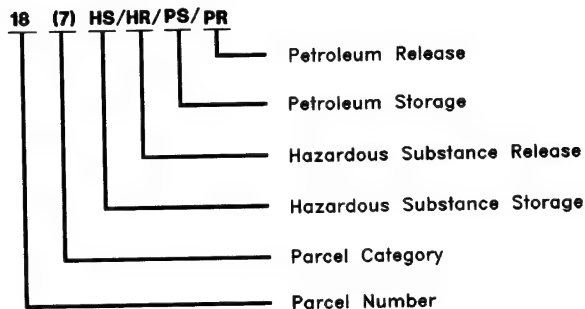
	PERMA
	SEMI-F
	TEMPO
	ROADS,
	EARTH
	BRAC I
	USTs
	ASTs

(6)

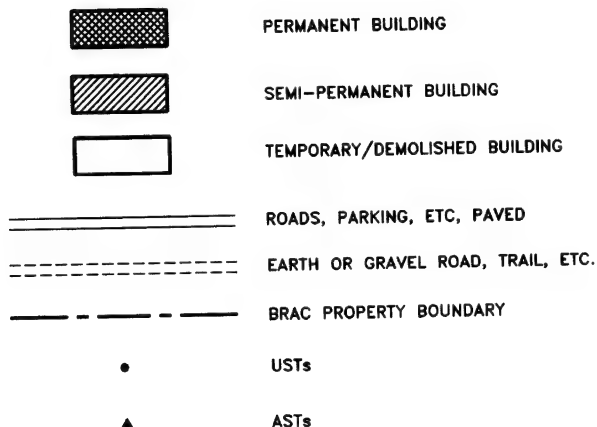
PARCEL CATEGORIES

<u>CATEGORY</u>	<u>COLOR</u>	<u>DEFINITION</u>
1	White	Areas where no storage, release, or disposal has occurred.
2	Blue	Areas where only storage has occurred.
3	Lt. Green	Areas where storage, release, disposal, and/or migration has occurred, but require no remedial action.
4	Dk. Green	Areas where storage, release, or disposal has occurred, and all remedial actions have been implemented.
5	Yellow	Areas where storage, release, disposal and/or migration has occurred, and action is underway, but not final.
6	Red	Areas where storage, release, disposal and/or migration has occurred, but required response actions have not been implemented.
7	Gray	Areas that are unevaluated or require additional evaluation.

PARCEL LABEL DEFINITIONS:



LEGEND:



18



17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

1(1)

2(7)HR/PR

RESERVED LAND/BUFFER

1008

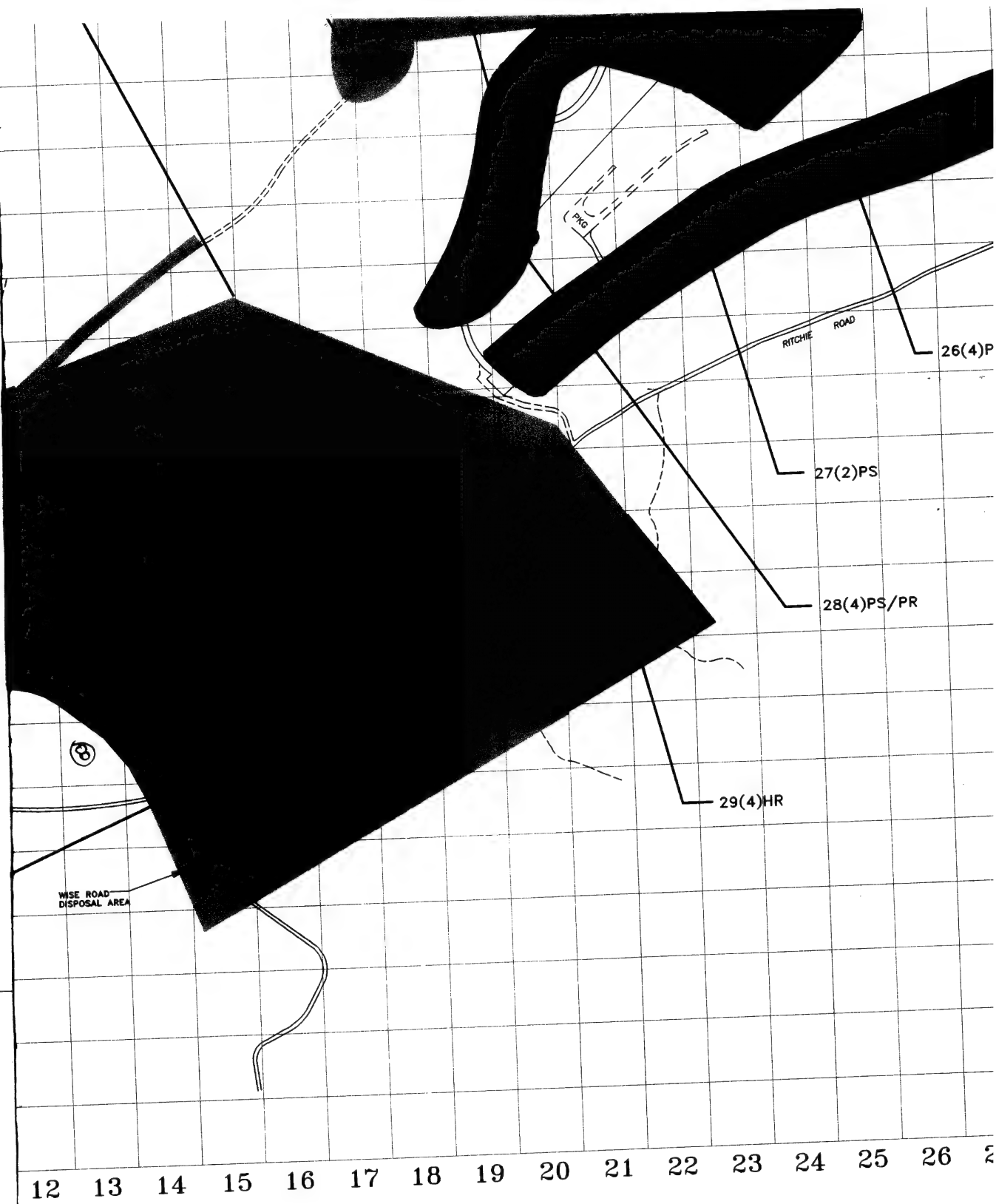
1010

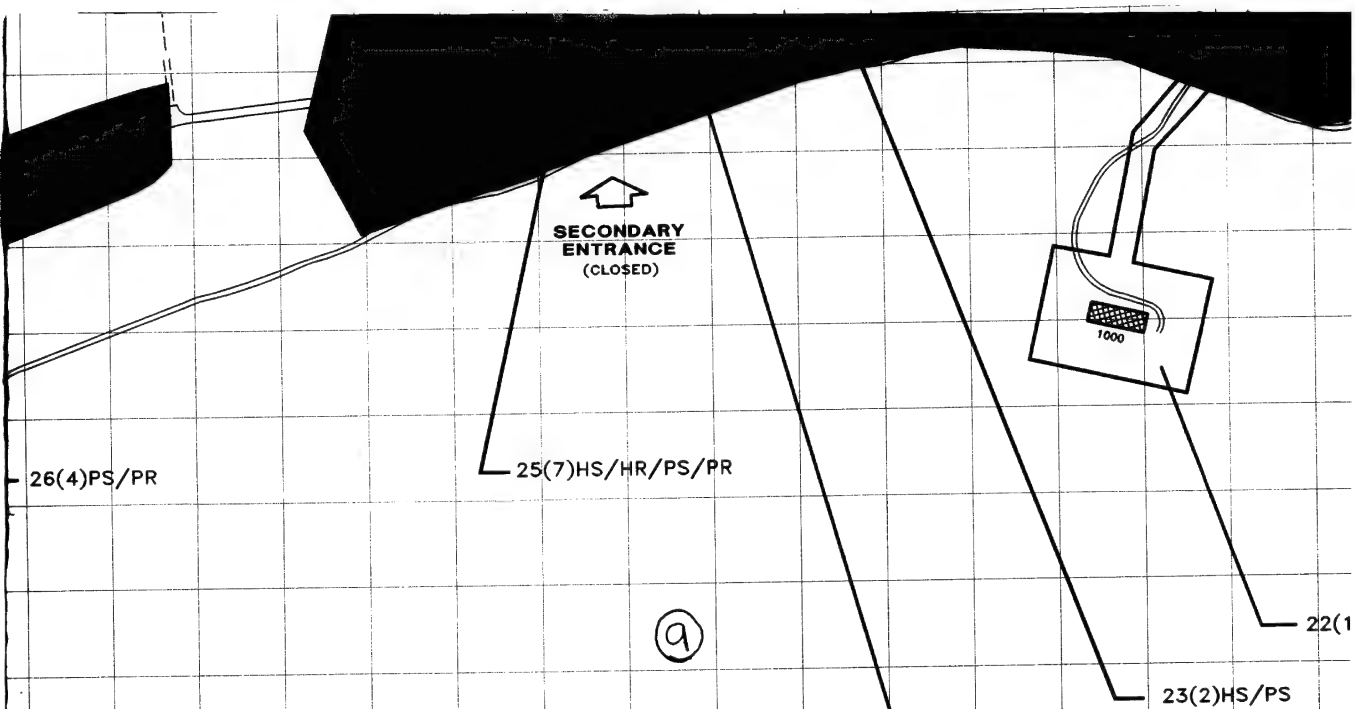
TO SMITHSBURG

WISE
DISPO

1 2 3 4 5 6 7 8 9 10 11 12

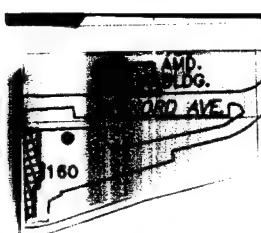
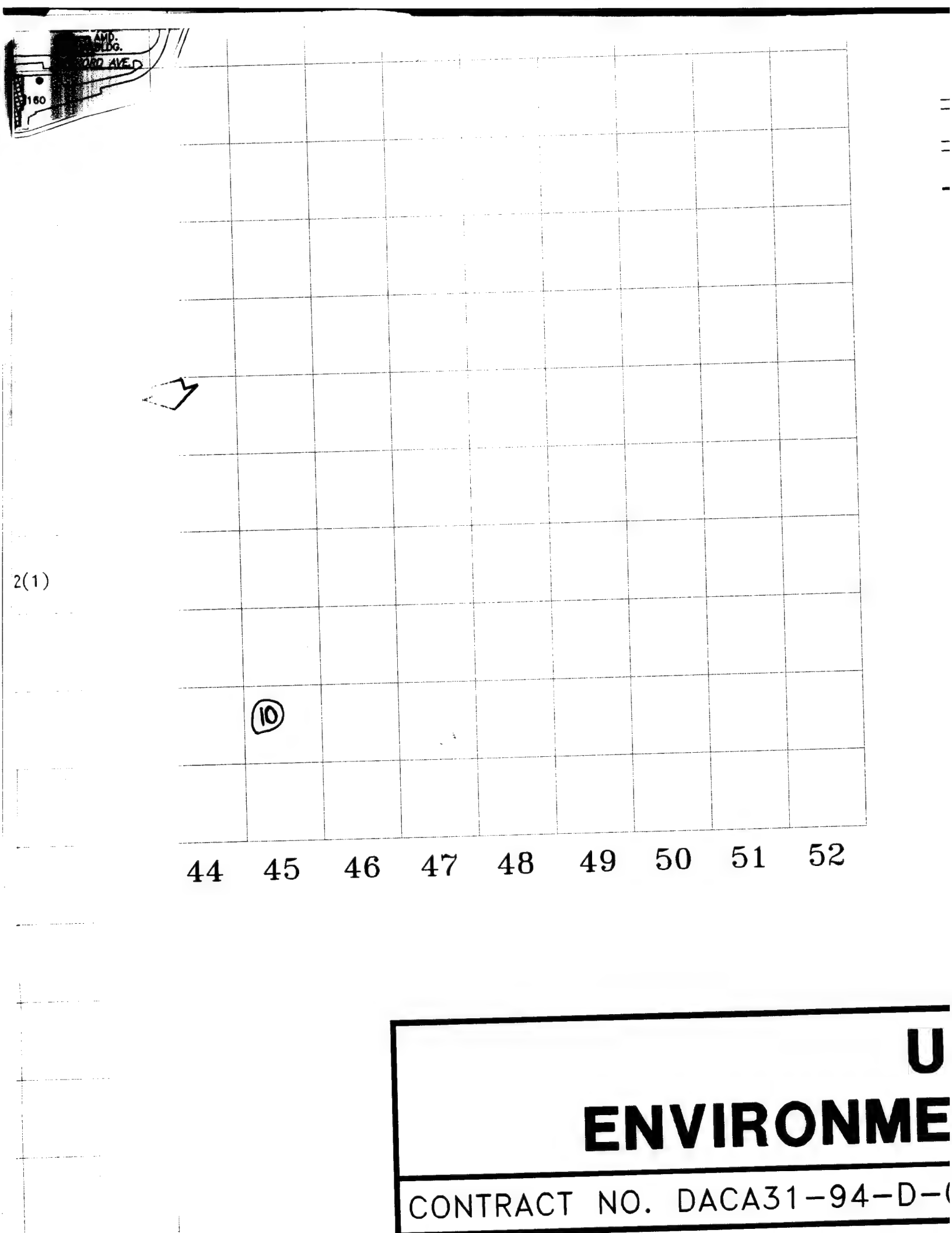






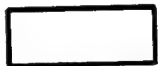
24(4)HS\HR\PS\PR	
COORDINATES	BUILDING
43,23	2
42,21	102
42,18	130
42,20	136/7
42,19	138/9
42,18	141
40,19	148
41,19	151
40,21	152
41,17	160
38,20	202
34,22	302
34,21	303
37,19	327
37,18	330
36,20	334/5
34,19	346

27 28 29 30 31 32 33 34 35 36 37 38 39 40 41

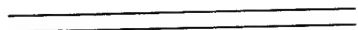


10

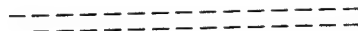
U
ENVIRONME
CONTRACT NO. DACA31-94-D-



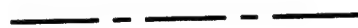
TEMPORARY/DEMOLISHED BUILDING



ROADS, PARKING, ETC, PAVED



EARTH OR GRAVEL ROAD, TRAIL, ETC.



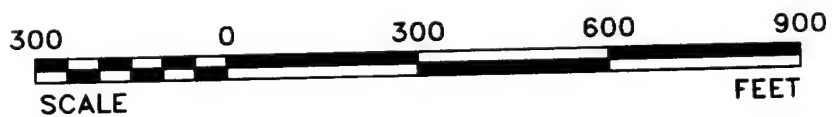
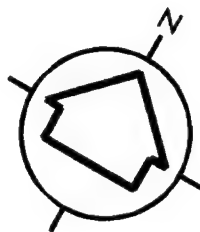
BRAC PROPERTY BOUNDARY



US's



AS's



US ARMY

ENVIRONMENTAL CENTER

ENVIRON

CONTRACT NO. DACA31-94

➡ **ICF KAISER**

1301 Co
Suite 10
Abingdon
(410) 61

PREPARED KDM

TASK NO:

CHECKED TL

ICF DWG M

DATE 06-24-96

FREBS

41 42 43

US ARMY ENVIRONMENTAL CENTER

O. DACA31-94-D-0064

USER

1301 Continental Drive
Suite 101
Abingdon, Maryland 21009
(410) 612-6350

TASK NO: 66225

ICF DWG NO:

-96

FREBSJ-1

FIGURE J-1

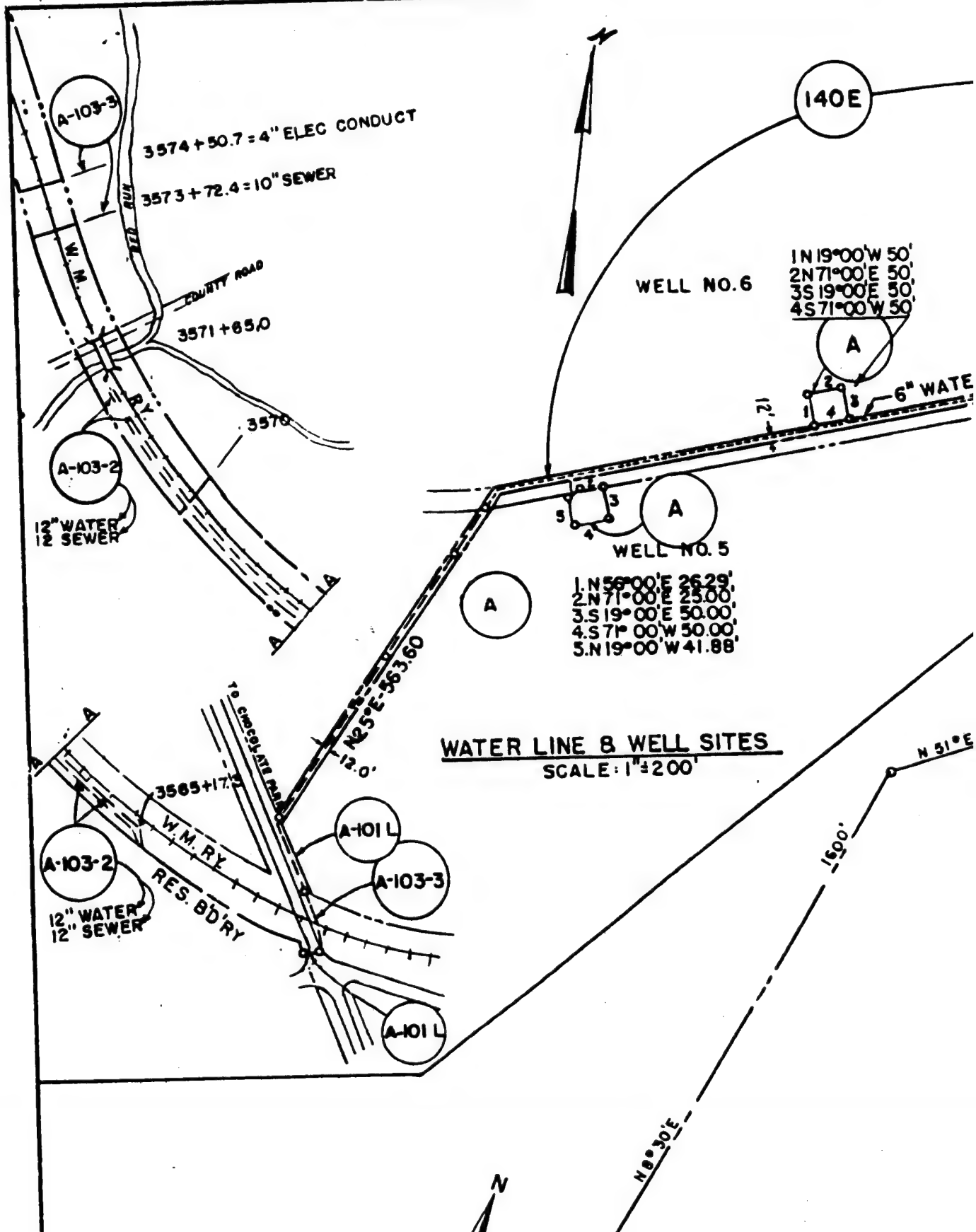
FORT RITCHIE

(13)

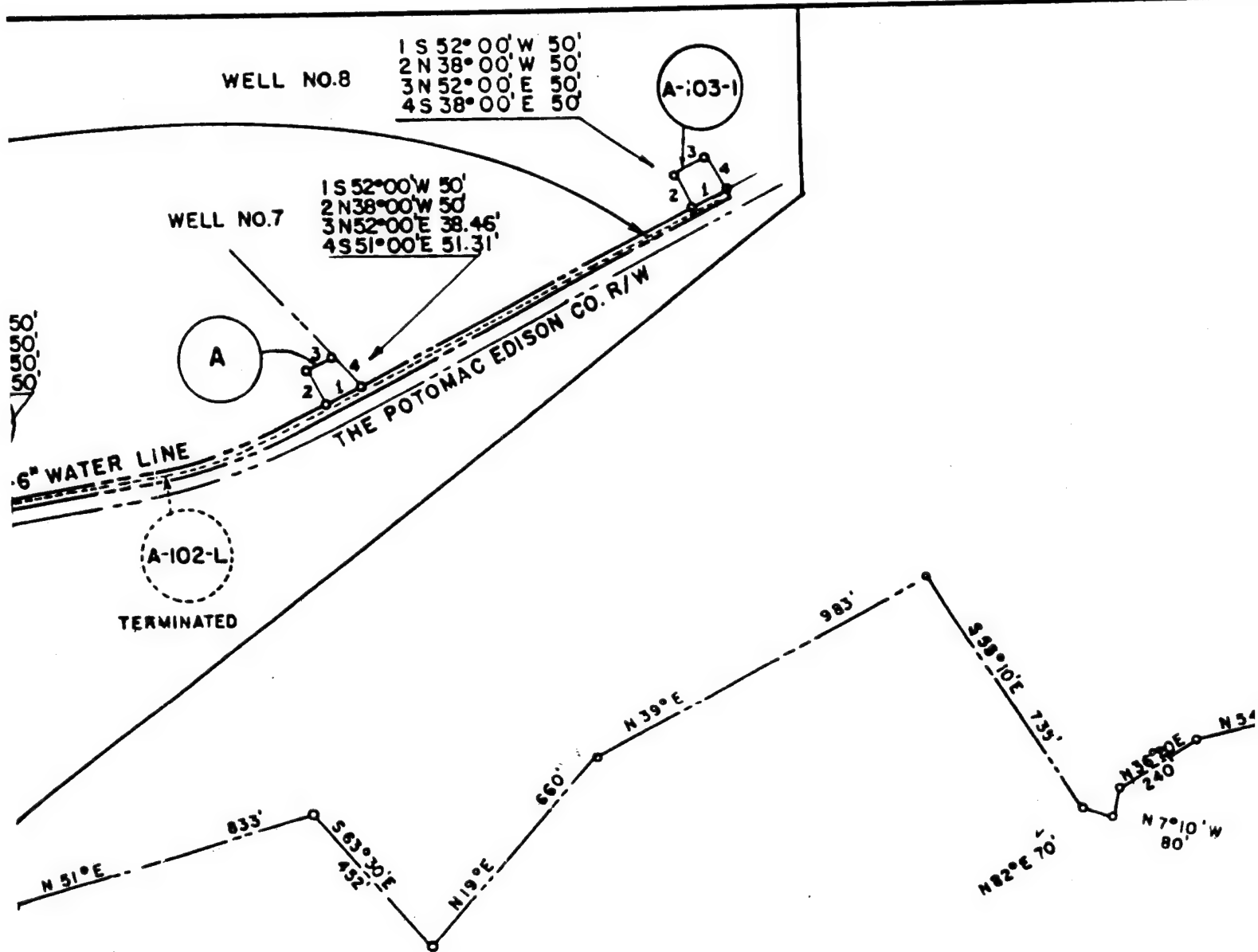
CERFA PARCEL
DESIGNATION
MAP

①

CORPS OF ENGINEERS

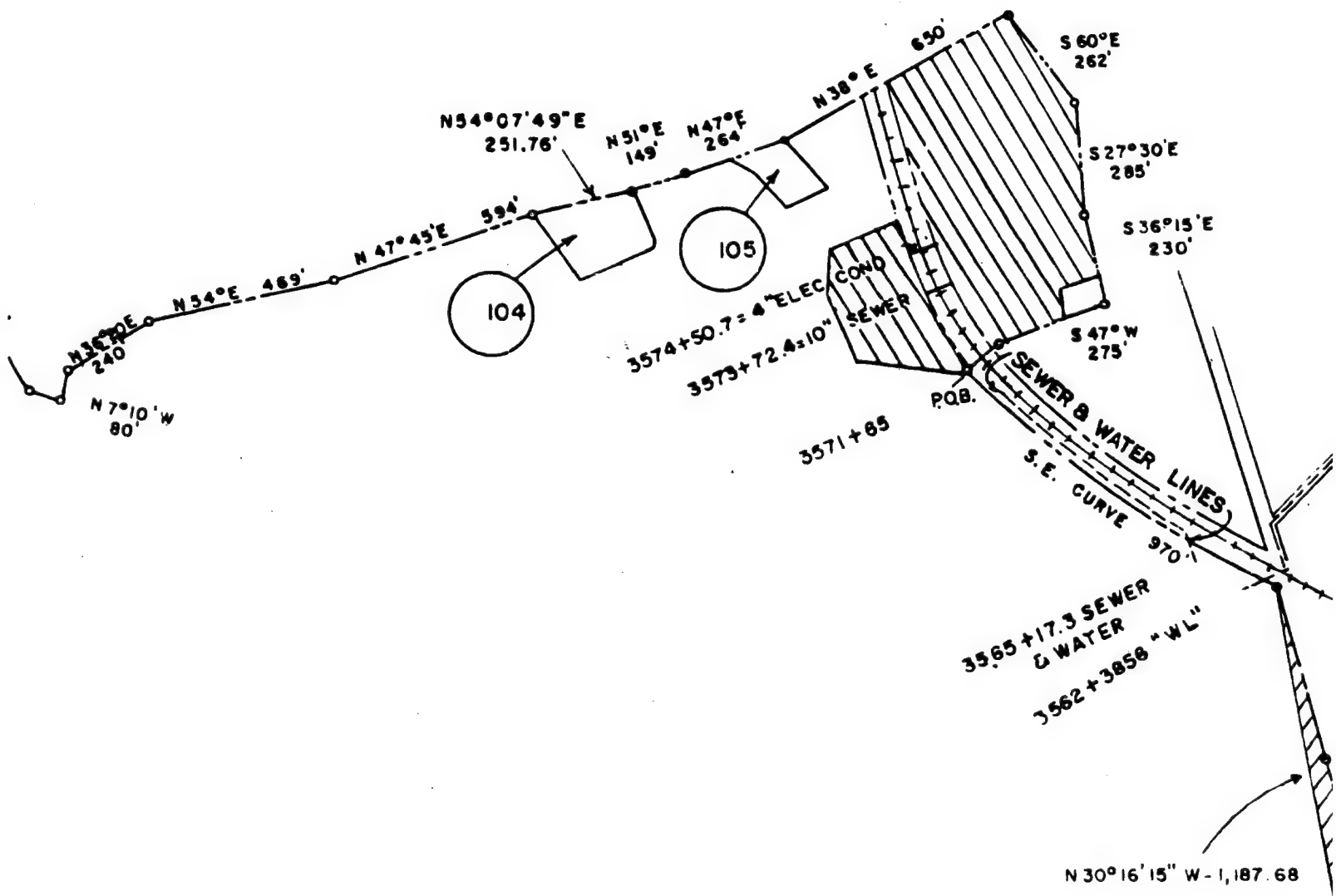


2

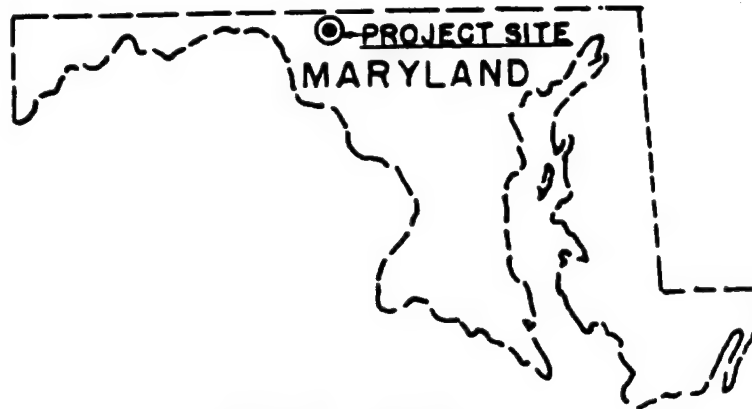


A-100-1

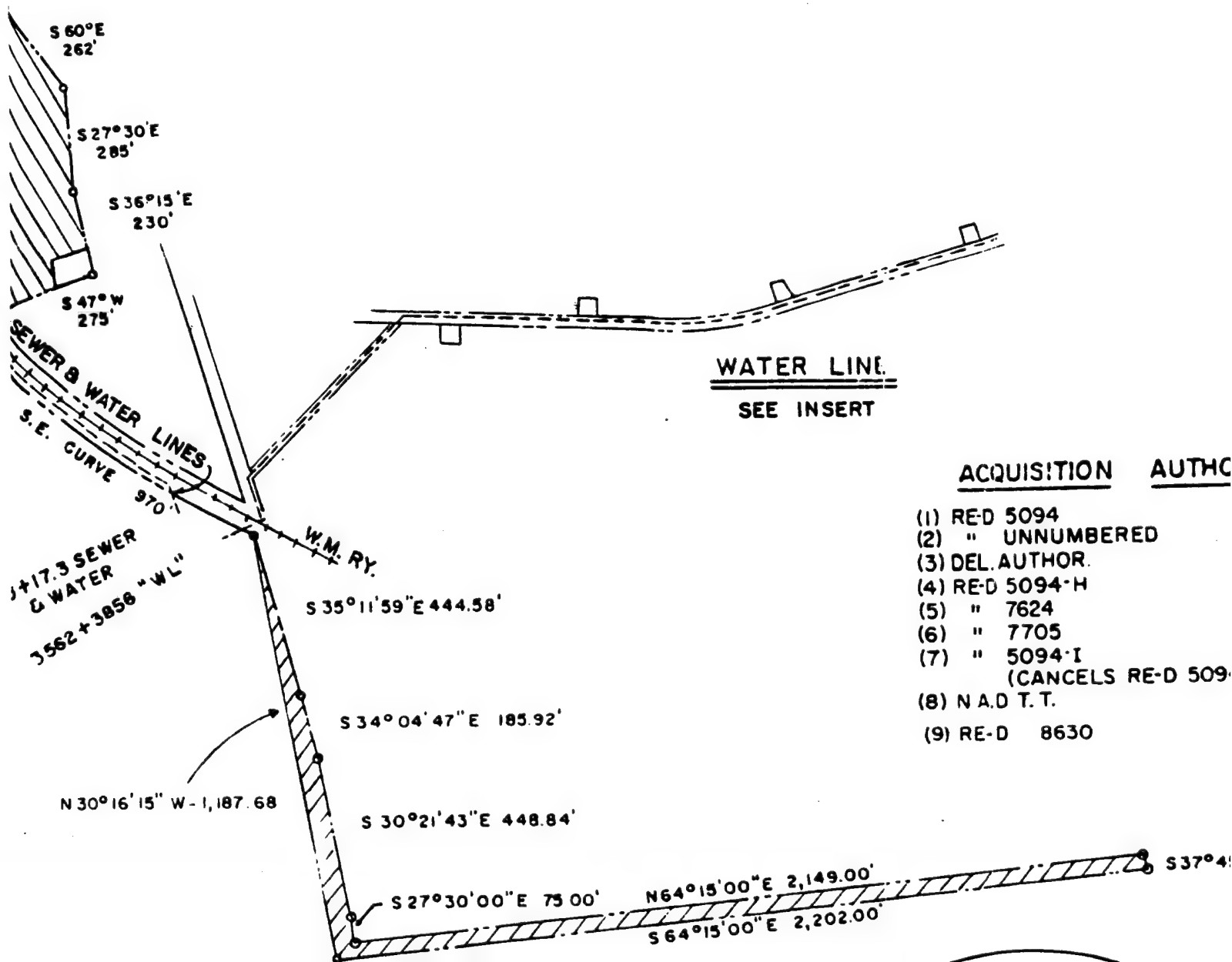
3



4



STATE INDEX



ACQUISITION AUTHORITY

- (1) RE-D 5094
- (2) " UNNUMBERED
- (3) DEL. AUTHOR.
- (4) RE-D 5094-H
- (5) " 7624
- (6) " 7705
- (7) " 5094-I
(CANCELS RE-D 5094)
- (8) N.A.D. T.T.
- (9) RE-D 8630

5

U. S. ARMY

FINAL PROJECT OWNERSHIP MAP

STATE MARYLAND
COUNTY WASHINGTON
DIVISION NORTH ATLANTIC
DISTRICT WASHINGTON
" TO BALTIMORE DISTRICT ON 7-1-61 "
FIRST ARMY AREA

LOCATION OF PROJECT

14 MILES NE OF HAGERSTOWN
20 MILES NW OF FREDERICK

TRANSPORTATION FACILITIES

RAILROADS W.M. RY.
STATE ROADS ST. 32
FEDERAL ROADS U.S. 15
AIR LINES NONE


ACQUISITION

POSITION	AUTHORIZATION
094	9-25-50.
UNNUMBERED	12-1-50.
THOR.	6-18-63.
094-H	6-5-59.
24	8-21-63.
705	9-23-65.
094-I	1-28-66.
CANCELS RE-D 5094-H).	
T.	5-17-66.
8630	7-21-88

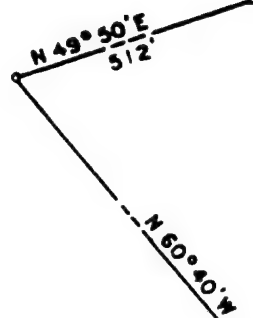
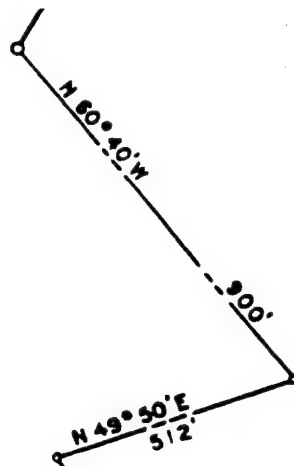
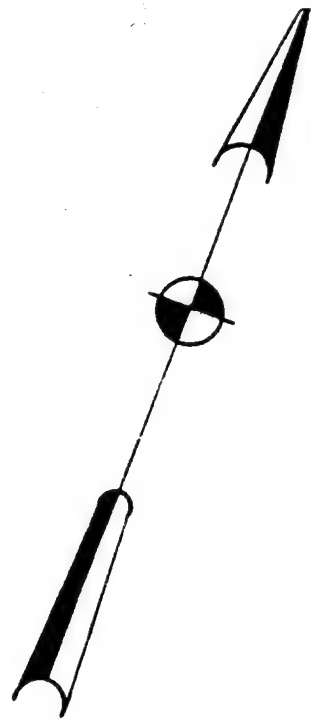
TOTAL ACRES ACQUIRED 637.57
635.65
ACRES FEE
ACRES REASSIGNED (1 EAS.) 0.31
ACRES LEASED (3 LEA.) NO AREA
(5-EAS)
ACRES LESSER INTERESTS (2-LIC.) 1.61
~~NO AREA~~

DISPOSAL

TOTAL ACRES DISPOSED OF 9.33
ACRES SOLD NONE
ACRES TRANSFERRED FEE 6.36

 S37°45'00"E 40.00'

6



$N 60^{\circ} 40' W$

1730'

106 E

$N 38^{\circ} E$
561'

$N 3^{\circ} E$

685'

$N 35^{\circ} 15' E$

$S 54^{\circ} E$
300'

1370'

$N 34^{\circ} E$

$N 30^{\circ} 36' W$

$S 45^{\circ} W$
225'

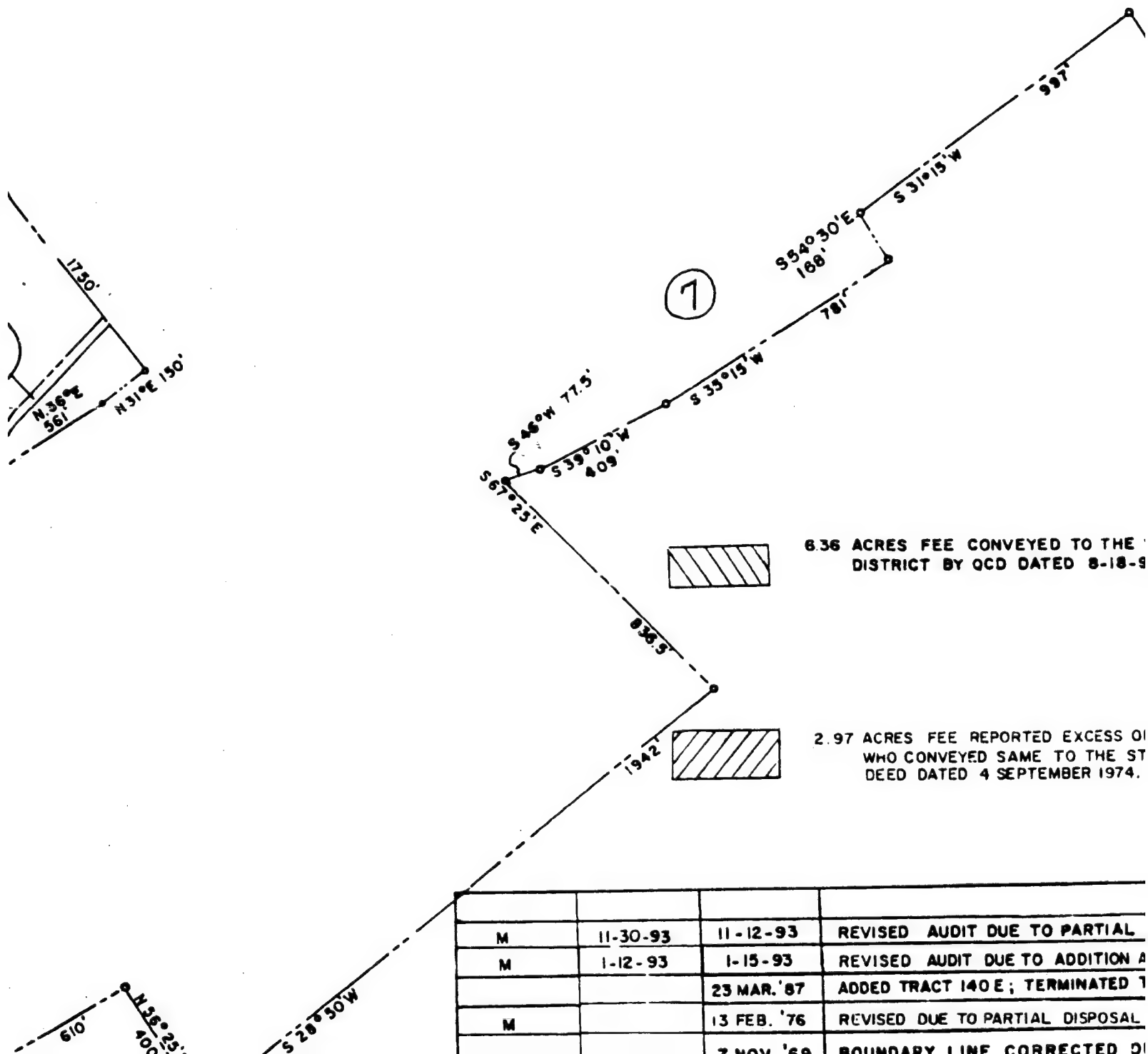
$N 35^{\circ} 25' W$

396'

$S 22^{\circ} W$

610'

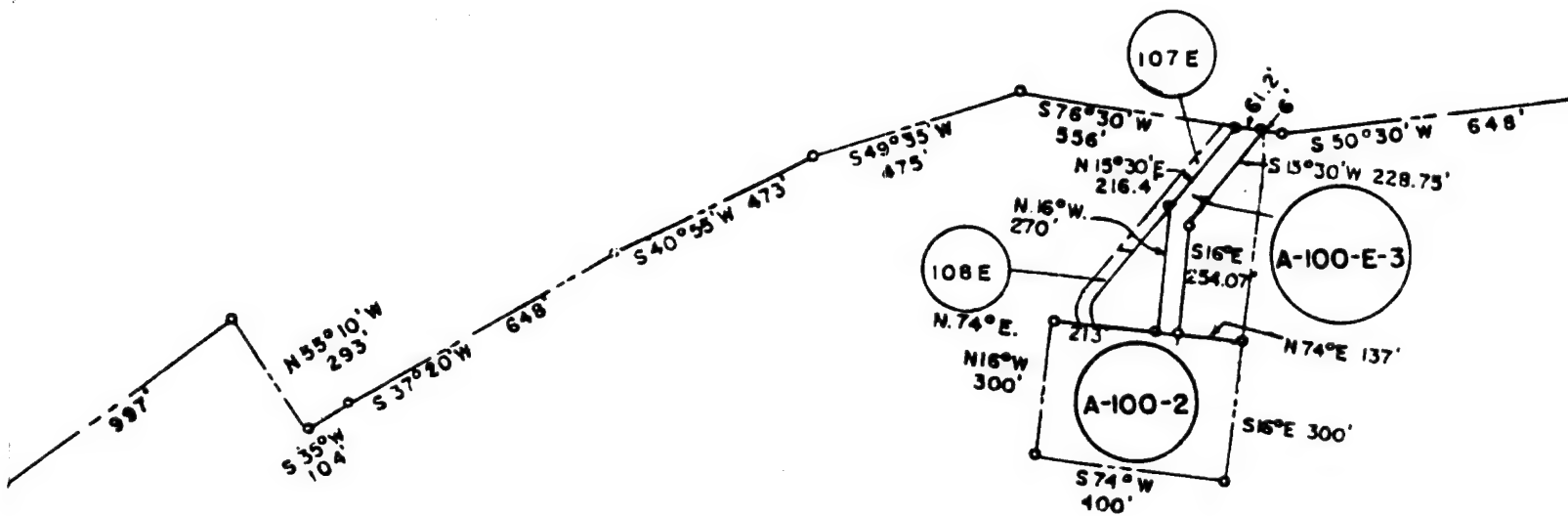
711'



6.36 ACRES FEE CONVEYED TO THE DISTRICT BY QCD DATED 8-18-93

2.97 ACRES FEE REPORTED EXCESS OF WHO CONVEYED SAME TO THE STATE BY DEED DATED 4 SEPTEMBER 1974.

M	11-30-93	11-12-93	REVISED AUDIT DUE TO PARTIAL
M	1-12-93	1-15-93	REVISED AUDIT DUE TO ADDITION A
		23 MAR. '87	ADDED TRACT 140 E; TERMINATED T
M		13 FEB. '76	REVISED DUE TO PARTIAL DISPOSAL
		7 NOV. '69	BOUNDARY LINE CORRECTED D



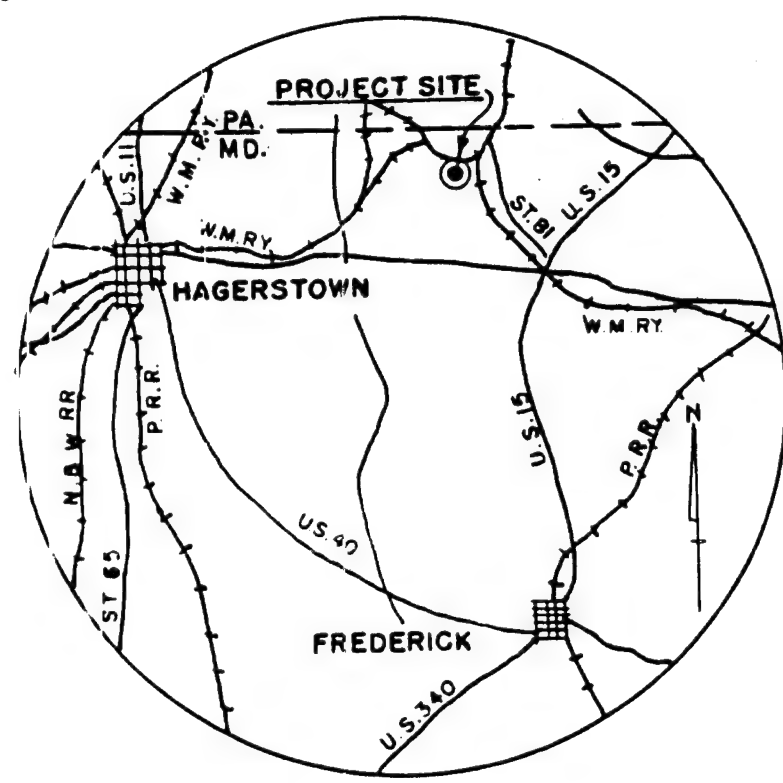
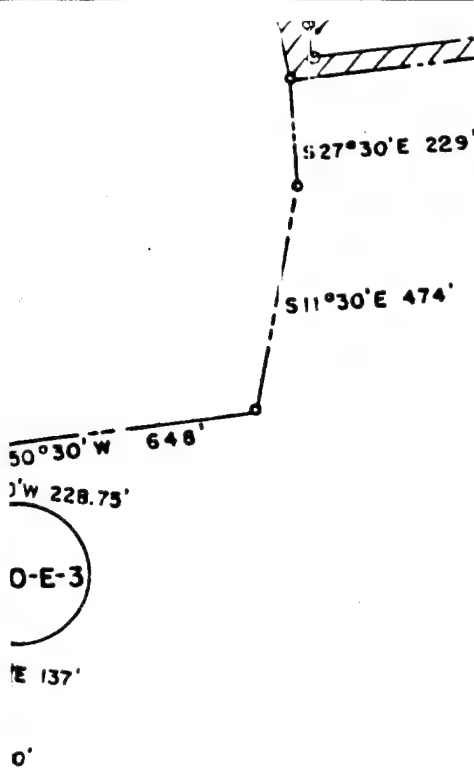
CONVEYED TO THE WASHINGTON COUNTY SANITARY
OCD DATED 8-18-93.

REPORTED EXCESS ON (SF-118) TO GSA 28 APRIL 1971,
ED SAME TO THE STATE OF MARYLAND BY QUITCLAIM
4 SEPTEMBER 1974.

AT DUE TO PARTIAL DISPOSAL	J.L.T.
AT DUE TO ADDITION ACQUISITION	JLT
40 E; TERMINATED TRACT A-102-L	B.W.A.
D PARTIAL DISPOSAL	GTD
NE CORRECTED DUE TO FIELD SURVEY	J.W.C.

8

ACQUISITION T		
RE-D CODE	TRACT NO.	LAND OWNER
(1)	A	CAMP RITCHIE
(1)	A-100-1	STATE OF MARYLAND
(2)	A-100-2	STATE OF MARYLAND
	A-100E-3	STATE OF MARYLAND
	A-101 L	WASHINGTON COUNTY
	A-102 L	THE POTOMAC EDISON CO.
(1)	A-103-1	WESTERN MD. RAILWAY CO.
(2)	A-103-2	WESTERN MD. RAILWAY CO.
	A-103-3	WESTERN MD. RAILWAY CO.
(5)	104	THE AARON STRAUS & LILLIE STRAUS FOUNDATION, INC.
(5)	105	THE AARON STRAUS & LILLIE STRAUS FOUNDATION, INC.
(6)	106 E	GREAT ROCK FOREST CORP



VICINITY MAP
STATUTE MILES



POSITION TRACT REGISTER

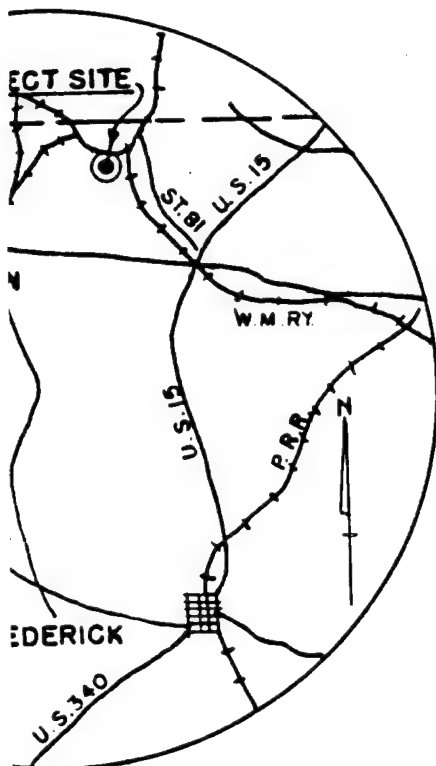
OWNER	ACREAGE			REMARKS
	FEE	REAS-SIGNED	LESSER INTEREST	
		0.31		(Eas.) 6" Water Line R/W & Well Sites
LAND	631.52			Deed dtd 13 Sept. 1951.
LAND	2.74			" " " " "
LAND			0.57	Perp. Eas. Deed dtd. 13 Sept. '51
COUNTY			NO AREA	(Lic.) 6" Water Line 3-11-52
DISON CO.			NO AREA	(Lic.) 6" Water Line 2-14-52
		LEASE		
RAILWAY CO.		NO AREA		Well Site DA-49-080-Eng-1002
RAILWAY CO.		NO AREA		12" Water Line 12" Sewer Line
				DA-49-080-Eng-1003
RAILWAY CO.		NO AREA		6" Water Line, 4" Conduit, 10" Sewer DA-080-Eng-1004
				Deed dated 18 May 1965
AUS & LILLIE				
ATION, INC.	0.95			
AUS & LILLIE				" " " " "
ATION, INC.	0.44			
ST CORP			0.33	Rd., & Utility Eas., dtd 6-15-66

NOTE:
THIS AREA WAS FORMERLY KNOWN
RITCHIE (SEE DRAWING MAD-20)
AS FORT RITCHIE.

REVISIONS	DATE	
	6-16-53	DUE TO
	25 AUG '55	ADDITION
	12-8-64	ADDED TR

NORTH ATLAN

DRAWN BY T.P.V.
 TRACED BY T.P.V.
 CHECKED BY M.E.J.
 SUBMITTED BY
William E. Smith
 ENGINEER
 RECOMMENDED BY
Jack B. B...
 CHIEF, REAL ESTATE DIV.
 APPROV
 OFFICE, CHIEF OF ENGINEERS, WASHINGTON



ITY MAP
UTE MILES

(10)

IE:

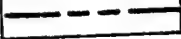





THIS AREA WAS FORMERLY KNOWN AS CAMP
RITCHIE (SEE DRAWING MAD-20) REACQUIRED
AS FORT RITCHIE.

ACRES RETRANS'D TO GOV'T AGENCY NONE
ACRES LEASES TERMINATED NONE
ACRES LESSER INTERESTS TERMINATED (I) NO AREA
ACRES TO G.S.A. (FEE) 2.97

LEGEND

NOTE.—USE SYMBOLS FROM FM-21-30 (WAR DEPT. BASIC FIELD MAN-
UAL) PAGES 21 TO 27 INCLUSIVE.

EXCEPT

RESERVATION LINE 
RESERVATION LINE (ACTUAL SURVEY) 
DAM SITE (TAKING LINE) 
RESERVOIR SITE (TAKING LINE) 
CONTOUR LINES 
AVIGATION EASEMENTS 


TRACT NO.

99

VISIONS	DATE		BY
	6-16-53	DUE TO REAUDIT	Y.P.P.
	23 AUG '55	ADDITION TO INSERT	K.V.M.
	12-8-64	ADDED TRACTS A-104 AND A-105	Y.P.P.

CORPS OF ENGINEERS, U. S. ARMY
NORTH ATLANTIC DIVISION, WASHINGTON DISTRICT

OWN BY T.P.V.
CED BY T.P.V.
CKED BY M.E.J.

MITTED BY

ENGINEER

COMMENDED BY

CHIEF, REAL ESTATE DIV.

REAL ESTATE

FORT RITCHIE

MILITARY RESERVATION

APPROVED BY

COL. G.E. DISTRICT ENGINEER

DATE

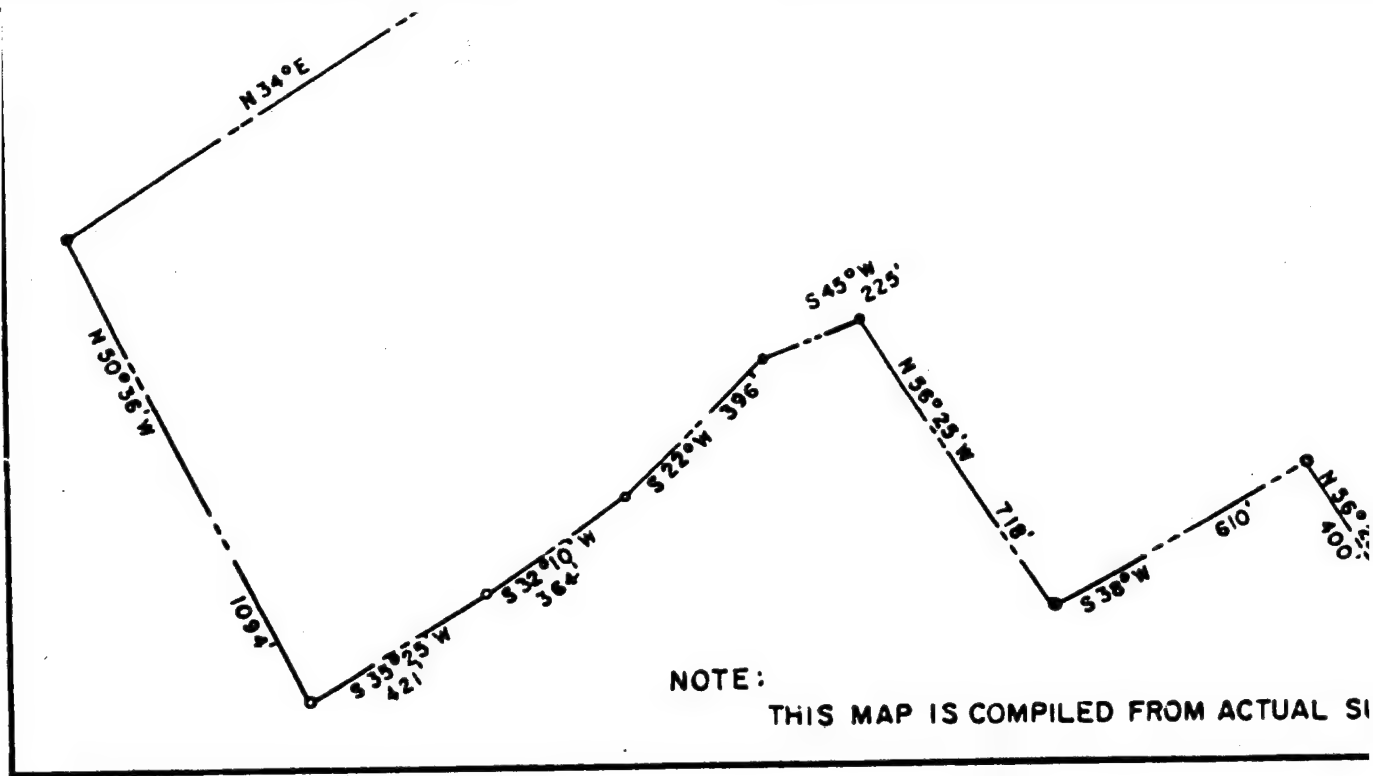
3 Jan '57

CHIEF OF ENGINEERS, WASHINGTON, D. C.

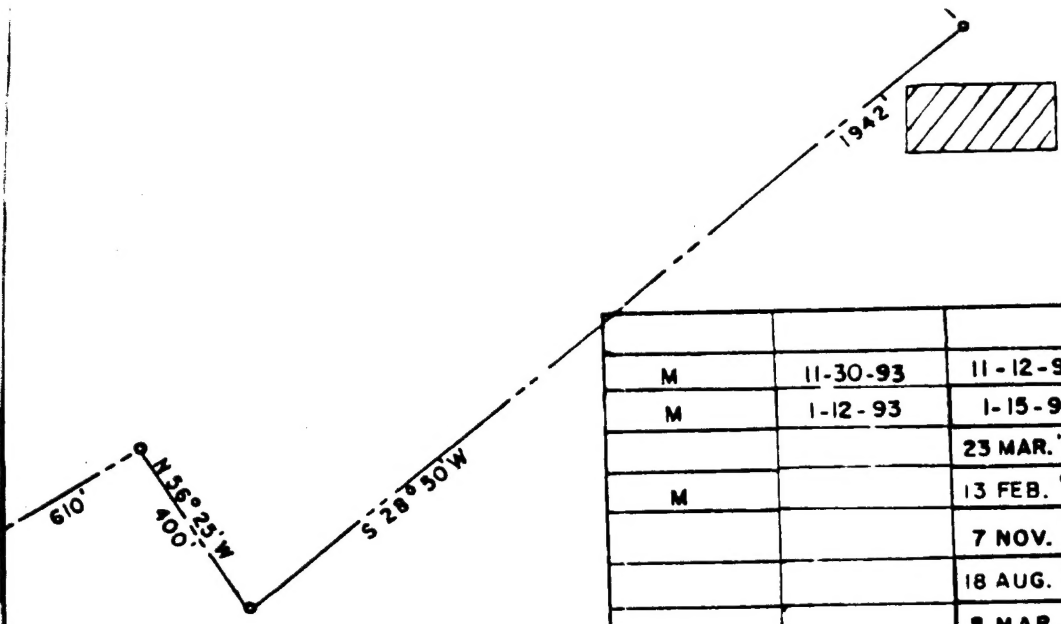
SCALE IN FEET

400

800



11



2.97 ACRES FEE REPORTED EXCESS ON (S
WHO CONVEYED SAME TO THE STATE
DEED DATED 4 SEPTEMBER 1974.

M	11-30-93	11-12-93	REVISED AUDIT DUE TO PARTIAL DIS
M	1-12-93	1-15-93	REVISED AUDIT DUE TO ADDITION ACQ
		23 MAR. '87	ADDED TRACT 140 E; TERMINATED TRA
M		13 FEB. '76	REVISED DUE TO PARTIAL DISPOSAL
		7 NOV. '69	BOUNDARY LINE CORRECTED DUE
		18 AUG. '66	DUE TO REAUDIT.
		8 MAR. '66	ADDED TRACTS A-109E, A-107E, &
MICROFILMED	DATE AUDIT APPROVED	DATE	REVISIO

DM ACTUAL SURVEY

(12)

PORTED EXCESS ON (SF-118) TO GSA 28 APRIL 1971,
SAME TO THE STATE OF MARYLAND BY QUITCLAIM
SEPTEMBER 1974.

UE TO PARTIAL DISPOSAL	J.L.T.
JE TO ADDITION ACQUISITION	JLT
E; TERMINATED TRACT A-102-L	B.W.A.
ARTIAL DISPOSAL	GTD
CORRECTED DUE TO FIELD SURVEY	J.W.C.
	S.S.W.
A-109E, A-107E, & A-108E	S.S.W.
REVISION	BY

	A-102 L	THE POTOMAC EDISON CO.
(1)	A-103-1	WESTERN MD. RAILWAY CO.
(2)	A-103-2	WESTERN MD. RAILWAY CO.
	A-103-3	WESTERN MD. RAILWAY CO.
(5)	104	THE AARON STRAUS & LILLIE
		STRAUS FOUNDATION, INC.
(5)	105	THE AARON STRAUS & LILLIE
		STRAUS FOUNDATION, INC.
(6)	106E	GREAT ROCK FOREST CORP
(6)	107E	CALVIN G. PRYOR, SR.
(6)	108E	G. M. McAFEE ET UX
(9)	140E	THE POTOMAC EDISON CO.

13

IN CO.		NO AREA	(Lic.) 6" Water Line 2-4-52
		LEASE	
WAY CO.		NO AREA	Well Site DA-49-080-Eng. 1002
WAY CO.		NO AREA	12" Water Line 12" Sewer Line
			DA-49-080-Eng. 1003
WAY CO.		NO AREA	6" Water Line, 4" Conduit, 10"
			Sewer DA-080-Eng. 1004
S & LILLIE			Deed dated 18 May 1965
ON, INC.	0.95		" " " "
S & LILLIE			" " " "
ON, INC.	0.44		" " " "
CORP		0.33	Rd., & Utility Ease, dtd 6-15-66
SR.		0.12	Road Easement, dtd 6-13-66
		0.13	" " " 6-14-66
ON CO.		0.46	perp. ease for water line

DRAWN BY T.P.V.

TRACED BY T.P.V.

CHECKED BY M.E.J.

SUBMITTED BY

William J. Smith
ENGINEER

RECOMMENDED BY

Jack B. Smith
CHIEF, REAL ESTATE DIV.

APPROVED BY

OFFICE, CHIEF OF ENGINEERS, WASHINGTON.

AUDITED

INSTALLATION NO. 1903

(14)

BY T.P.V.
BY T.P.V.
ED BY M.E.J.

REAL ESTATE

FORT RITCHIE

TED BY

min. Powell
ENGINEER

MILITARY RESERVATION

MENED BY

Chas. J. ...
REAL ESTATE DIV.

APPROVED BY

Chas. J. ...
COL. C.E. DISTRICT ENGINEER

DATE

3 Dec '37

CHIEF OF ENGINEERS, WASHINGTON, D. C.

UNITED



LATION NO. 1903

SHEET 1 OF 1 DRAWING NO. N.A.D. 138

(15)

Eng. Form 1456-b

12/-